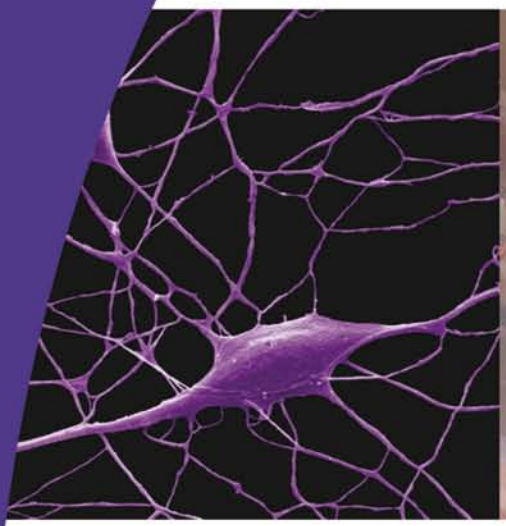
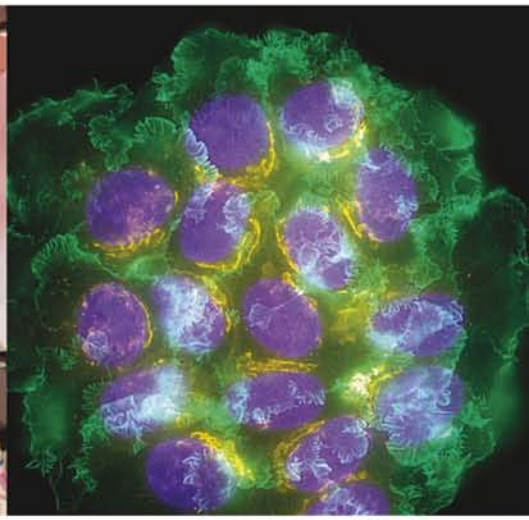
ATCC®

Cell Biology Catalogue 2007





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LGC Promochem

in partnership with ATCC®

ATCC®

Cell Biology Catalogue

2007

Your **Discoveries**
Begin with **Us.**®

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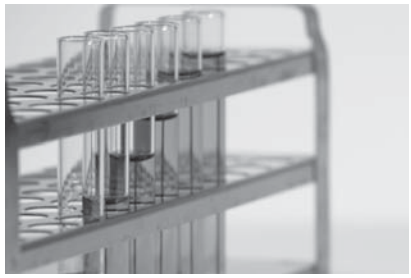

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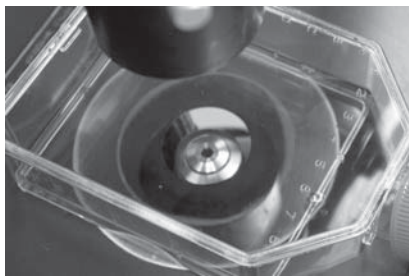

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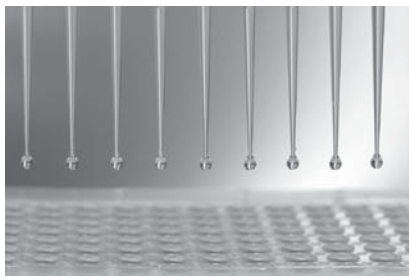

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Section I: General Information

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How to use the catalog
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Introduction

Choose ATCC cell lines with confidence

Every ATCC cell line and hybridoma comes with comprehensive authentication and quality assurance testing and is backed by dependable technical support. From the initial starter culture derived from the original depositor's ampule to the final distribution vials, continual testing for species confirmation and contamination is performed to deliver high-quality reagents with minimal passage numbers.

Each year, ATCC cultivates approximately 1,200 different cell lines and produces hundreds of thousands of vials for distribution.

Risks of over-subculturing

It is well known that cell characteristics can change when cell lines are cultivated for extended periods.[1-6] It is also true that stocks of commonly used cell lines maintained in many laboratories have been passaged hundreds of times and should not be considered as true models of the original source material. Furthermore, cellular cross-contamination of cell lines occurs with alarming frequency.[7,8] Finally, contamination of cell lines with mycoplasma can lead to detrimental effects including chromosomal aberrations, growth changes, alterations in gene expression, and changes in virus replication and antibody production.[9]

Inexplicable variations in experimental data may be a signal that the cell line has been subcultured too many times or is contaminated and needs to be replaced.

Comprehensive testing of cell lines at ATCC

The ATCC accessioning process ensures that problems associated with genetic instability, cell line selection, senescence, and transformation are avoided. When a culture arrives at ATCC for deposit, a preliminary freeze is done and is checked for contamination and the species is verified (Figure 1). Cells are further characterized with a selection of tests when appropriate:

- Testing for microbes, including mycoplasma, determines that the culture is free from contamination.
- Isoenzyme analysis, karyotyping, and immunological testing verify the species of origin.
- Morphologies of growing cells are recorded at low and high densities and are routinely made available to researchers on the ATCC website.
- Short tandem repeat (STR) profiling is used to confirm the identity of all human cell lines.
- The viability of the cell line is checked before and after freezing.
- Growth characteristics such as growth rates and cell density are recorded.
- Various specialized testing such as determining the immunoglobin subclass secreted by hybridomas or confirming expression of cellular markers by flow cytometry may be employed.
- Specific cytogenetic events may be confirmed by karyotyping (for example, translocations in leukemias or lymphomas).

ATCC maintains over 3,600 different cell lines and hybridomas and distributes research materials to more than 80 countries.

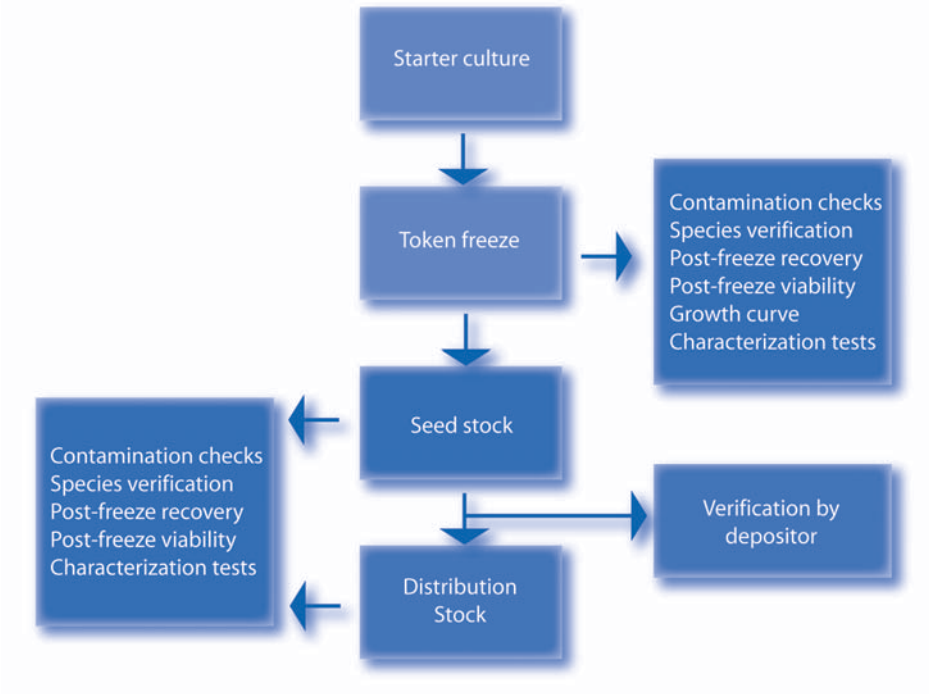

Figure 1. The general ATCC accessioning scheme. Cells deposited at ATCC undergo repeated quality testing before distribution. The seed stock method ensures that the number of passages is minimized.

Introduction

State-of-the-art bioproduction

A large number of frozen vials are prepared from depositor-supplied stock which are stored as seed stock and used for future production runs. Quality testing is applied to the seed stock and is repeated for each new distribution lot. This system avoids prolonged serial subculturing and minimizes the number of passages that the cells undergo.

All cryopreserved material at ATCC is meticulously stored in liquid nitrogen vapor. Both the temperature and the liquid nitrogen levels in the freezers are monitored continuously.

ATCC processes for accessioning, producing, storing, and distributing cell lines ensure that researchers consistently receive high-quality reagents.

Start with genuine ATCC cell cultures

Well-characterized reference cultures are the best starting materials for any research project. Cell lines from ATCC offer significant advantages:

- Systematic experimentation — high-quality cells at the same passage level over the course of years.
- Comprehensive quality testing — standard cells with an authenticated origin, documented history, and described characteristics.
- Reliable source — a broad spectrum of cell lines that may otherwise be difficult to find and are available worldwide.

Figure 2. ATCC routinely uses the SelecT™ system for high-throughput automated cell culturing.

References

1. Esquenet M et al. LNCaP prostatic adenocarncinoma cells derived from low and high passage numbers display divergent responses not only to androgens but also to retinoids. J. Steroid Biochem. Mol. Biol. 62(5-6): 391-399, 1997.
2. Briske-Anderson MJ et al. Influence of culture time and passage number on the morphological and physiological development of Caco-2 cells. Proc. Soc. Exp. Biol. Med. 214(3): 248-257, 1997.
3. Chang-Liu CM and Woloschak GE. Effect of passage number on cellular response to DNA-damaging agents: cell survival and gene expression. Cancer Lett. 113(1-2): 77-86, 1997.
4. Yu H et al. Evidence for diminished functional expression of intestinal transporters in Caco-2 cell monolayers at high passages. Pharm. Res. 14(6): 757-762, 1997.
5. Sambuy Y et al. The Caco-2 cell line as a model of the intestinal barrier: Influence of cell and culture-related factors on Caco-2 cell functional characteristics. Cell Biol. Toxicol. 21(1): 1-26, 2005.
6. Wenger SL et al. Comparison of established cell lines at different passages by karyotype and comparative genomic hybridization. Biosci. Rep. 24(6):631-639, 2004.
7. Buehring GC et al. Cell line cross-contamination: how aware are mammalian cell culturists of the problems and how to monitor it? In Vitro Cell. Dev. Bio. Anim. 40(7): 211-215, 2004.
8. Thompson EW et al. LCC15-MB cells are MDA-MB-435: A review of misidentified breast and prostate cell lines. Clin. Exp. Metastasis 21(6): 535-541, 2004.
9. McGarrity GJ et al. Cell culture mycoplasmas. In: The Mycoplasmas, Vol IV. Razin S and Barile MF, eds. New York: Academic Press; pp. 353-390, 1985.

How to Use the Catalog

The *ATCC 2007 Cell Biology Catalog*ue contains indexes arranged by cell line name, source and application. The catalogue number can be searched on the ATCC website to find complete, detailed and up-to-date information on the item.

Cell line indexes

- **Alphanumeric** — lists all cell lines and hybridomas by name
- **Tissue source** — lists nontumor cell lines by tissue source
- **Species other than human, mouse and rat**
- **Hybridomas** — lists hybridomas by antigenic determinant
- **Tumor cell lines by disease**
- **Tumor cell lines from metastatic sites**
- **Tumor/normal matched cell line pairs**
- **Stem cells** — lists germline-competent, pluripotent and nullipotent embryonic stem cell lines and feeder cell lines used to support stem cell growth
- **Cell lines used as tools and models** — includes hybridoma fusion partners, differentiating lines and lines used as factor assay systems
- **Neurobiology**
- **Genetic variant fibroblasts**
- **Immortalized cells**
- **Genes and bioactive compounds** — lists cell lines by gene product or by receptor with gene product

These indexes provide basic information such as ATCC number, source and morphology. For a complete description of the product, including associated protocols and price, use the ATCC website.

Reviewing the Product Description Online

After finding the catalogue number of a cell line of interest, go to **www.lgcpromochem.com/atcc.** From the homepage, click on "Search Catalog: Choose Option" in the upper right corner, and select "By ATCC Number" from the drop-down menu.

Enter the ATCC number of the cell line into the query window and click the search button. You will be taken directly to the description for that product.

The description includes important detailed information about the line and how to successfully propagate it (Figure 3). Specific characteristics are provided for each cell line:

Price — does not include shipping and handling.
Designation — the name of the cell line as given by the depositor or originator.
Depositor — the person or institution who submitted the cells to ATCC.
Biosafety Level — the ATCC suggested level for safe shipment of the item.
Shipped — the description of how the cells are shipped, either frozen or in a flask.
Medium and Serum — contains a link to the **Propagation** field.
Propagation — includes a detailed description of the recommended medium and supplements.
Growth Properties — indicates either adherent or suspension.
Organism — identifies the source of the cells.
Morphology — describes the appearance of the cultured cell line. If a microscope icon appears in this field, click on it to view a photomicrograph of the cell line.
Source — describes the physiological source of the cells. This field will indicate whether the cells are normal or tumor, the type of cancer, and if the cell line is a hybridoma.
Cellular Products — lists the compounds produced by the cells, including proteins, hormones, and monoclonal antibodies.
Permits/Forms — provides a link to information that will help determine which (if any) regulatory documents are necessary to receive the cell line.

Figure 3. The complete description of an ATCC cell line as found on the website.

The information in the **Propagation** field is critical. For best results right from the start, ATCC strongly recommends using the specified medium and method for cultivating the cells, especially when first initiating the culture. (For more information on propagating a cell line from ATCC, see page 260).

Read the formulations for recommended media carefully. Formulations vary among media suppliers, and other additives and supplements are sometimes needed. When the propagation information reads "adjusted to contain," it means that the base medium as sold by ATCC already contains ingredients in those amounts; if you are using a different supplier make sure to check the label. "Supplemented with" means that a substance must be added to the ATCC formulation of the basic medium.

> **Example:** The propagation field for TIB-202 reads "RPMI-1640 medium with 2 mM L-glutamine adjusted to contain 1.5 g/l sodium bicarbonate, 4.5 g/l glucose, 10 mM HEPES and 1.0 mM sodium pyruvate and supplemented with 0.05 mM 2-mercaptoethanol, 90%; fetal bovine serum, 10%." This means that ATCC's RPMI-1640 medium (Catalogue No. 30-2001) contains 2 mM L-glutamine, 1.5 g/l sodium bicarbonate, 4.5 g/l glucose, 10 mM HEPES and 1.0 mM sodium pyruvate. To create this complete growth medium, add 0.05 mM 2-mercaptoethanol and 10% (v/v) fetal bovine serum to the RPMI-1640 base medium.

How to Search the ATCC Website

The ATCC website is the complete guide to ATCC products, services, and protocols. New items are continually added to the online catalog, making the website the most up-to-date resource for information. In addition to descriptions of each cell line, technical help and cell culture products can also be found here.

Here are some tips for using the ATCC website to help find the cells you need.

Search by ATCC catalogue number

To find a cell line by the ATCC catalogue number, start at the ATCC home page at **www.lgcpromochem.com/atcc.** Click on the "Search Catalog: Choose Option" field in the upper right corner of the page and choose "By ATCC Number" from the drop-down menu. The resulting search page finds ATCC products by catalogue number.

Search by keyword

The ATCC website's search engine will also locate cell lines by keyword searching. There are two ways of accessing the ATCC Cell Biology Collection search function from the homepage. 1) Click on the "Search Catalog: Choose Option" field in the upper right corner, and choose "Cell Lines and Hybridomas" from the drop-down menu; or 2) Click on "Cell Lines and Hybridomas" from the list running down the left side of the page.

Search by field

Enter search terms into the appropriate drop-down fields under the Field Search (Figure 4). Most of the fields are self-explanatory, such as Organism, Depositor and Gender. Source is one of the most commonly used fields and includes the source of the cells, the disease state (if any) and the word "hybridoma" if applicable.

> **TIP**: The Cellular Products field is used to find cell lines that produce certain compounds, such as hormones or monoclonal antibodies.
>
> **TIP**: Use the word "against" rather than "anti" when searching hybridomas: **against CD28,** not anti-CD28.
>
> **TIP**: The Comments field is used when depositors provide information that does not easily fit into other fields. It is valuable when searching for particular functions or special characteristics, such as information regarding related cell lines or the parental line from which the cells were derived.

When the search results appear (Figure 5), choose one cell line to view by clicking on the linked ATCC number in the column at the left, or select several cell lines by checking the boxes on the right and choosing "View Selections." Your browser will then open the product description page (Figure 3).

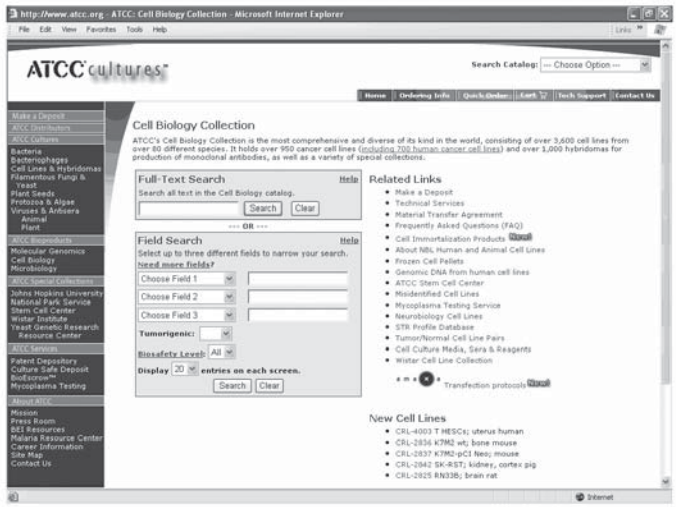

Figure 4. The ATCC cell biology search page with field search and full-text search functions.

Full-text search

The full-text search is the broadest way to search the collection (Figure 4). By entering words or characters that describe the cell line, a list of all cell lines that contain an exact match of the terms anywhere within the description is provided. For example, enter the word **bovine** into the query window, the search engine will retrieve all records that contain the word "bovine".

> **TIP**: Note that this type of search will retrieve cell lines that are of bovine origin and those that simply require bovine serum. If the search results in too many hits, try field searching.

Using wildcards

Both the field search and the full-text search will retrieve **exact** matches for search terms. If the exact spelling or abbreviation is unknown, use the wildcard symbol * to replace characters. For example, if the cell line name starts with MDA but you are unsure of the rest, search for **MDA***, and the search engine will find all cell lines that begin with those letters.

How to Search the ATCC Website

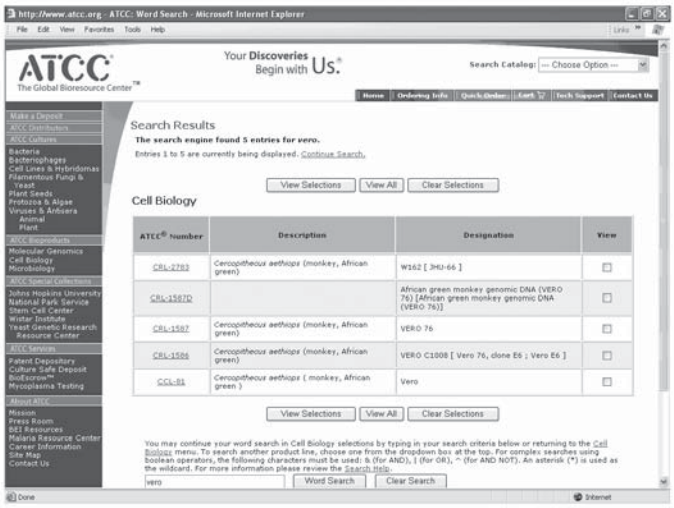

Figure 5. The ATCC online catalogue search results page.

Troubleshooting a search

If no hits are returned:

- Check the spelling. The search engine will return only exact matches. Try using the wildcard symbol * to find varieties of a term.
- Some cell lines are not a part of the general collection. A cell line may be in a confidential safety deposit or it may be a patented cell line which has not been accessioned into the general collection. Not all patent items are listed in the online catalog. Contact ATCC Technical Services department at tech@atcc.org if you have questions.
- The cell line may have been removed from the collection. When the identity of a cell line proves to be incorrect, ATCC notes these items on the "Misidentified Cell Lines" page. See the Cell Biology Search page for this link.

If too many hits are returned:

- Narrow the search by adding as many relevant terms to the correct field windows as possible. Only records which contain all the words will be retrieved.
- Use search operators to define the search. The "and not" symbol (^ or shift-6) can help eliminate unwanted results. For example, if **human** is entered in the Organism field and **lung ^carcinoma** in the Source field, the search will find cells from human lung that are not derived from carcinomas.
- Use the field search instead of the full-text search.

If you have trouble finding the cells you need, contact Technical Services by phone (see back cover for details) or by email at atcc-tech@lgcpromochem.com.

Other website resources

In addition to listing the cell lines available from ATCC, the website is also a resource for technical literature, material safety data sheets, media formulations and customer service information. A PDF version of this catalogue is also available online. The site is best viewed using Internet Explorer version 5.0 or higher, Netscape 4.8 or higher, Firefox 1.0 or higher, and Safari.

Cell culture media, sera, and reagents

ATCC distributes media, sera, and reagents to support the growth and maintenance of ATCC cell cultures. Media formulations have been specifically designed to promote proliferation and sustain long-term growth of ATCC cell lines. Likewise, all lots of serum provided by ATCC have been tested for growth-promoting properties against a variety of cell lines in the collection. ATCC also offers dissociation reagents, attachment factors, and hybridoma development products to assist in all areas of cell culture and development. For best results, use ATCC media, sera, and reagents!

Cell Biology Collections

General collection

The ATCC Cell Biology Collection is composed of several subcollections organized by how the cells were deposited. The prefixes to the catalogue numbers were originally assigned to designate the source of funding for the cell line's accession. Certified Cell Lines (CCL) and Cell Repository Lines (CRL) are part of the general collection. Cell lines acquired through contract-supported cell banks such as the Tumor Immunology Bank (TIB), the Human Tumor Cell Bank (HTB), and the Hybridoma Bank (HB) are also part of the general collection. Unless special funding is available for cell line additions, most cell lines are accessioned as CRLs. When this series of numbers is used up, the prefix CBA (Cell Biology A) will be used, followed by CBB, etc.

Patented cell line collection

Hundreds of cell lines have been deposited into the ATCC Patent Depository. As part of the legal requirements for the patent process, these cell lines become available to researchers when the patent first issues. These products are noted with a dagger symbol (†) throughout the catalogue and they may not be used in a manner to infringe the patent claims.

NBL line collection

The NBL collection of human and animal cell lines was developed at the Naval Biosciences Laboratory (NBL) in Oakland, California, and transferred to ATCC in 1982.

One purpose of the NBL collection was to produce and distribute early passage cultures of cells from various species. Many of these cultures, unlike most others available from ATCC, are not well characterized and may be of mixed populations. NBL lines from tumors, for example, may consist of mixtures of stromal and cancer cells in which the former cell type predominates. As early passage cultures, they have a limited doubling potential and will be removed from the collection as they approach senescence. To ensure viability and post-freeze recovery these cultures are usually distributed in flasks as growing cultures.

Most of the NBL cell lines are neither fully characterized nor accessioned by ATCC; therefore, they are not warranted to the same extent as other accessioned cell lines. ATCC does not guarantee they will maintain a specific morphology, purity, or any other property upon passage. The information provided on these cell lines was not generated by ATCC. As noted in ATCC's Material Transfer Agreement, it is the purchaser's responsibility to assess and interpret this information in consideration of the use, selection, application, or suitability of these cell lines. NBL cell lines are noted with an asterisk (*) throughout the catalog. Whenever time and resources permit, ATCC will fully accession cultures from this collection. In these few cases the cells are distributed as frozen vials.

ATCC Special Collections

ATCC Special Collections represent collaborations with major research institutions around the world to provide valuable research tools to the scientific community. These items are noted as such in the product descriptions. Each collection has a distinct emphasis in the type of materials it offers, such as a focus on limited fields or applications, a wide spectrum of materials from one source, or unique or exclusive availability. Two ATCC Special Collections contain items of interest to cell biology:

Johns Hopkins Special Collection — materials developed by the Johns Hopkins University faculty.

Wistar Special Collection — a set of human vascular cell lines developed by researchers at the Wistar Institute in Philadelphia.

Third-party use agreements may be necessary for receiving these Special Collection cell lines and are described in the online catalog.

Institutions that participate in the formation of Special Collections benefit from ATCC capabilities in customizing storage and distribution services for their valuable materials.

ATCC Stem Cell Center

ATCC was awarded an NIH-NCRR grant (P40RR15452) in 2000 which included the following objectives:

- Characterization of animal stem cell lines
- Standardization and optimization of stem cell research methodologies and procedures
- Development of new reagents broadly applicable across a range of species and strains for stem cell research

ATCC subsequently launched the Stem Cell Center to ensure the availability of embryonic and tissue-specific stem cells as well as to provide a centralized source for information dissemination and exchange.

Today the Center houses one of the largest research teams focused on stem cells. The Center maintains nearly 70 human and mouse cells lines and has qualified media, sera, and other reagents for use in stem cell research.

Placing an Order

General Information

Distribution of ATCC materials in the United States and internationally is regulated by the US government. All orders are subject to applicable government regulations and ATCC policies. For these reasons, ATCC requires all customers to have an approved and current ATCC account to place an order.

ATCC has authorized distributors in many countries. Customers in locations without an authorized distributor should order directly from ATCC. With an ATCC account you can order by phone, fax, email or online.

Phone	United States, Canada, and Puerto Rico:
	800-638-6597
	International: +1 703-365-2700
Fax	703-365-2750
Email	sales@atcc.org
Web	www.lgcpromochem.com/atcc
Postal mail	ATCC
	PO Box 1549
	Manassas, VA 20108-1549

An order form can be found on the website under **Ordering Info.** To place an order by phone, have your account number, verification of the billing address, shipping information, end-user information and PO (purchase order) or credit card number ready.

An ATCC account number can be used to order directly through the website. When the desired item is located in the online catalog, click the "Order this item" button at the top of the description to add the product to the shopping cart.

Applying for an ATCC account

To apply for ATCC account, contact ATCC at sales@atcc.org for an application or download the application from the website. Go to **www.lgcpromochem.com/atcc** and select "Ordering Info" from the top of the page. Click on the link to New Account Application, fill out the form, and print it. Fax or mail the completed application to ATCC.

ATCC policy requires that all customers provide a description of their facility (including biosafety capabilities), as well as the full name and contact information for all the investigators who will be using the products.

New account approval takes approximately two weeks. To avoid delays, carefully complete all sections on the application and be sure to sign it.

Pricing

Current list prices are posted on the ATCC website and do not include shipping and handling fees. A discount off the current list price will be applied to most cultures for nonprofit institutions in the United States and Canada. Cultures that are ordered as test tubes or flasks will carry an additional laboratory fee. Prices are subject to change without notice. To receive a pro forma quote for an order, fill out an order form and indicate clearly that you are requesting a quote only.

Terms and conditions

Complete terms and conditions regarding the purchase of ATCC cultures can be found in the Material Transfer Agreement on page 287 of this catalogue and on the website. Terms and conditions are subject to change without notice; see the website for the most current information.

Distributors

Authentic ATCC products are only available from ATCC and its authorized distributors. Authorized ATCC distributors streamline the ordering process and provide local customer support. Customers in the following locations must order from a local distributor:

Australia/New Zealand
Cryosite
9 Sirius Road
Lane Cove NSW 2066
Australia
Tel: (61)2 9420 1400
Freecall (Australia only): 1800 220 410
Fax: (61)2 9420 1414
Email: atcc@cryosite.com
Website: www.cryosite.com

China/Macau
Beijing Zhongyuan Limited
Rm. 1001, South Building No. B3
Huayuan Road
Beijing 100083, China
Tel: 86-10-62355630
Fax: 86-10-82015198
Email: office@sinozhongyuan.com
Website: www.sinozhongyuan.com

Tin Hang Technology Limited
Units 1904-06, 19/F.
No. 340 Queen's Road Central
Hong Kong
Tel: 852-28172121
Fax: 852-25807763
Email: sales@tinhangtech.com
Website: www.tinhangtech.com

Europe
LGC Promochem
Queens Road
Teddington
Middlesex TW11 0LY, UK
Email: atcc@lgcpromochem.com/atcc
Tel: 44 (0)20 8943 8489
Fax: 44 (0)20 8943 8405
Website: www.lgcpromochem/atcc
For technical inquiries: atcc-tech@lgcpromochem.com/atcc

Hong Kong
Tin Hang Technology Limited
Units 1904-06, 19/F.
No.340 Queen's Road Central
Hong Kong
Tel: 852-28172121
Fax: 852-25807763
Email: sales@tinhangtech.com
Website: www.tinhangtech.com

India
LGC Promochem India Pvt. Ltd.
142, III Floor, 5th Cross
RMV Extension
Bangalore 560080
India
Tel: +91-80-23611256 / 23614774
Fax: +91-80-23613859
Email: in@lgcpromochem.com/atcc

Japan
Summit Pharmaceuticals Intl. Corp.
Harumi Island Triton Square Office Tower Z
1-8-12, Harumi, Chou-ku
Tokyo 104-6233, Japan
Tel: 81-3-3536-8640
Fax: 81-3-3536-8641
Email: atcc@summitpharma.co.jp
Website: www.summitpharma.co.jp (in English and Japanese)

Korea
KORAM Biotech Corp.
7F, Koram Venture Town
907-1, Daechi-Dong, Kangnam-ku
Seoul 135-280, South Korea
Tel: 82-2-556-0311
Fax: 82-2-556-0828
Email: koram@korambiotech.com
Website: www.korambiotech.com

Singapore
BioGen Pte Ltd
36 Toh Guan Road East
#01-39 Enterprise Hub
Singapore 608 580
Tel: (65) 6273 3022
Fax: (65) 6273 3020
Email: sales@biogensin.com
Website: www.biogensin.com

Taiwan, R.O.C.
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P.O. Box 7-0955
No. 202, 9/F, Sec. 1
Hoping East Road
Taipei, Taiwan R.O.C.
Tel: (02)2368-3600
Toll Free Tel: 0800-231-045
Fax: (02)2368-7887
Email: ubis@ms75.hinet.net

Depositing with ATCC

The ATCC Cell Biology Collection was established in 1962 through the cooperative efforts of ATCC, scientific advisory committees, and a group of collaborating laboratories. Today as a biological resource center, ATCC continues to offer a broad and comprehensive collection of animal cell lines and hybridomas through the efforts of many scientists.

Depositing a cell line into the general collection

ATCC welcomes deposits of valuable research material into the cell biology general collection. Unfortunately, all items that are offered cannot be accepted. Several factors are generally considered in selecting new cell lines:

- A characteristic or application not yet represented in the collection
- Literature citations
- Useful life expectancy in vitro
- Broad scientific utility for meeting the needs of many researchers

Use the "Make a Deposit" section of the website to offer materials for deposit. The first step will be to contact a staff scientist with a description of the material and applicable literature references. After an evaluation of the information, you will be contaced about transferring the cell line to ATCC. There is no charge for depositing materials into the general collection.

Cell Storage Services

ATCC has been providing patent and safe deposit services for corporations, government laboratories, and academic institutions for over 50 years. As a neutral nonprofit organization, ATCC stores valuable cells, microorganisms, and related materials safely and dependably without conflict-of-interest concerns.

Patent deposit

ATCC has been providing dependable, legally compliant storage of materials for patent purposes since 1949, long before depositing was a formal requirement of any patent office. The patent depository currently includes more than 20,000 strains of biological materials.

ATCC offers the following assurances with patent deposits:

- **Compliance with legal requirements —** ATCC will process the documentation to ensure that legal requirements are met for each deposit.
- **Dependable storage —** ATCC has been storing biological materials since 1925 and is the leader in maintaining viability and integrity of cultures.
- **International patenting —** ATCC is an International Depository Authority (IDA) under the International Budapest Treaty for deposits to meet patent office requirements in many countries. All countries signatory to the Budapest Treaty must recognize the deposit of biological material with any IDA. Standard patent deposit, which meets the requirements of the United States Patent and Trademark Office (USPTO), is also available.
- **Versatile storage —** ATCC accepts the following biological material for patent purposes: Algae, animal viruses, bacteria, bacteriophages, cell lines, cloned genes, nonhuman embryos, filamentous fungi, hybridomas, plant tissue cultures, plant viruses, purified DNA, protozoa, genomics materials (clones, vectors, libraries, etc.), seeds, and yeasts.
- **Security and confidentiality —** The ATCC facility is specially designed for secure long-term storage of biological materials. All deposits are strictly confidential until the patent issues.
- **Related services —** ATCC also provides custom freezing, interim storage and depositor notification of purchasers upon request.

The first step in depositing materials for patent purposes is to contact the **Patent Depository**.

PO Box 1549
Manassas, VA 20108-1549
Fax: 703-365-2745
Email: PatentDeposit@atcc.org

ATCC staff will provide the forms and information required to deposit patent materials.

Safe deposit

ATCC offers two types of safe deposit services for proprietary materials.

Standard safe deposit is consistent with ATCC practices for handling and storage of materials entrusted to ATCC since its founding in 1925.

cGMP safe deposit provides cell bank storage that is compliant with current good manufacturing practices (cGMP).

Both the cGMP safe deposit and the standard safe deposit services offer secure, confidential storage of valuable materials and include the following assurances:

Security

- The ATCC facility is specifically designed for large-capacity storage of cell lines, microorganisms, and other biological materials.
- ATCC has a long history of safe, trouble-free operation in the storing of biological materials.
- All cell lines are stored in liquid nitrogen freezers equipped with monitoring systems and 24-hour surveillance to safeguard stored material.

Confidentiality

- All rights to the cell cultures remain with the depositor.
- All information concerning deposited material is retained in confidence.
- Culture material is available only to the depositor or his or her designee. All requests must be made in writing.

Optional special services

Depositing with ATCC

- One vial of each culture can be returned to the depositor for analysis after a one-week storage period to ensure viability of material received.
- Cultures for standard safe deposit can be prepared for freezing by ATCC staff.
- Standard safe deposit material can be distributed to the depositor or designated individual(s).
- Multi-year discounts are available.

Additional features of cGMP safe deposit:

- Dedicated and validated liquid nitrogen freezer with access restricted to cGMP-trained staff with QA oversight.
- Tracking labels for all shipments to ensure segregation of cGMP materials immediately upon receipt at ATCC.
- Separate storage boxes for each cell bank or multiple banks in one box (depositor's option). Materials from only one customer are stored in a box.
- Direct QA supervision of all freezer entry and retrieval activities.
- Dedicated and trained staff.
- Annual third-party audit report for all depositors (included with fee).

If you currently have materials stored in the ATCC Standard Safe Deposit that should be handled under cGMP conditions, ATCC can arrange to transfer these materials.

For additional information or to initiate cGMP safe deposit, contact ATCC Professional Services at SafeDep@atcc.org or call 703-365-2700 ext. 2519.

Section II: Cell Culture Bioproducts

High-performance liquid media
High-performance sera
Media supplements and antibiotics
Reagents, buffers and stains
Extracellular matrix products
Hybridoma development and cryopreservation
MTT Cell Proliferation Assay
ELF® Phosphatase Detection Kit

ATCC bioproducts™

High-Performance Liquid Media

ATCC media contain specific component concentrations following the recommendations of ATCC cell culture scientists. These recommendations are based on extensive evaluation of growth and viability requirements of individual cell lines.

All ATCC products are manufactured to exact specifications and each lot is rigorously tested to meet the standards of performance and quality imposed by the ATCC Cell Culture Facility, where distribution stocks for numerous cell lines are produced routinely.

Media by the same name from different manufacturers may have subtle but important differences in their compositions. Such differences may alter or disturb normal cell growth.

Using ATCC high-performance media and sera is the best way to guarantee robust cell growth with minimum cell loss, especially when reviving cells from cryopreservation.

These products are for laboratory research use only. Not intended for use in humans, animals or for diagnostics.

High-Performance Liquid Media

Product Name	ATCC® No.	Key Components	Uses and Benefits
Dulbecco's Modified Eagle's Medium (DMEM)	30-2002 (500 ml)	4 mM L-glutamine 4500 mg/l glucose 1500 mg/l sodium bicarbonate	Optimized energy sources for protein production and nucleic acid metabolism while limiting toxic ammonia build-up To be used with **5% CO_2** to maintain pH
ES-DMEM	SCRR-2010 (500 ml)	4500 mg/l glucose No L-glutamine	Optimized for embryonic stem cells To be used with **5% CO_2** to maintain pH
DMEM: F12 Medium	30-2006 (500 ml)	2.5 mM L-glutamine 0.5 mM sodium pyruvate 15 mM HEPES 1200 mg/l sodium bicarbonate	1:1 mix of Dulbecco's medium and Ham's F12 Optimized to maintain pH To be used with **5% CO_2** to maintain pH
Eagle's Minimum Essential Medium (EMEM)	30-2003 (500 ml)	1 mM sodium pyruvate 2 mM L-glutamine 1500 mg/l sodium bicarbonate	Balanced energy sources to serve as carbon skeletons for anabolic processes as well as protein production and nucleic acid metabolism while limiting toxic ammonia build-up To be used with **5% CO_2** to maintain pH
F-12K Medium	30-2004 (500 ml)	2 mM L-glutamine 1500 mg/l sodium bicarbonate	Designed to support the growth and differentiation of primary cells with or without serum To be used with **5% CO_2** to maintain pH
Hybri-Care Medium Powder	46-X		Formulated to support the growth of hybridomas and fastidious cell lines
Iscove's Modified Dulbecco's Medium (IMDM)	30-2005 (500 ml)	4 mM L-glutamine 4500 mg/l glucose 1500 mg/l sodium bicarbonate	Optimized energy sources for protein production and nucleic acid metabolism while limiting toxic ammonia build-up To be used with **5% CO_2** to maintain pH
Leibovitz's L-15 Medium	30-2008 (500 ml)	2 mM L-glutamine	Optimized energy source for protein production and nucleic acid metabolism while limiting toxic ammonia build-up No added sodium bicarbonate; to be used **without CO_2**
McCoy's 5A Medium Modified	30-2007 (500 ml)	1.5 mM L-glutamine 2200 mg/l sodium bicarbonate	Optimized energy source for protein production and nucleic acid metabolism while limiting toxic ammonia build-up To be used with **5% CO_2** to maintain pH
RPMI-1640 Medium	30-2001 (500 ml)	1 mM sodium pyruvate 2 mM L-glutamine 4500 mg/l glucose 10 mM HEPES 1500 mg/l sodium bicarbonate	Balanced energy sources to serve as carbon skeletons for anabolic processes as well as for protein production and nucleic acid metabolism while limiting toxic ammonia build-up. Optimized to maintain pH To be used with **5% CO_2** to maintain pH

* See website for complete media formulations.

ATCC bioproducts™

High-Performance Sera

ATCC high-performance animal sera come from United States Department of Agriculture-approved origins. Experienced technicians thoroughly test the packaged sera to eliminate contamination concerns. All ATCC sera are prequalified on multiple cell lines to ensure robust growth using both sequential subcultures and plating efficiencies.

- Each lot of ATCC high-performance sera is subjected to comprehensive tests for sterility and performance.
- Sterility tests are performed on each lot using USP XXIII methods for bacterial and fungal contamination.
- Comprehensive viral testing adheres to 9 CFR 113.53 guidelines.
- Mycoplasma testing is performed via direct culture and Hoechst DNA staining.
- Limulus amoebocyte lysate (LAL) procedure is used to measure endotoxin values.
- All tests are performed post-packaging to guarantee the highest-quality, best-performing sera.

	Catalogue No.	Volume
Fetal Bovine Serum	**30-2020**	**500 ml**
	30-2021	**100 ml**
Fetal Bovine Serum, ES Qualified*	**SCRR-30-2020**	**500 ml**
Calf Bovine Serum	**30-2030**	**500 ml**
	30-2031	**100 ml**
Horse Serum	**30-2040**	**500 ml**
	30-2041	**100 ml**

** Qualified for mouse and human embryonic stem cells by the ATCC Stem Cell Center*

These products are for laboratory research use only. Not intended for use in humans, animals or for diagnostics.

Media Supplements and Antibiotics

Media supplements from ATCC allow you to customize the growth conditions for your cells.

	Catalogue No.	Volume
L-Glutamine Solution, 200 mM	**30-2214**	**100 ml**

L-Glutamine is an essential amino acid required by virtually all mammalian and insect cells grown in culture. L-Glutamine is more labile in liquid cell culture media than other amino acids and thus is often added as a supplement prior to use.

L-Alanyl-L-Glutamine Solution 200mM	**30-2115**	**100 ml**

L-alanyl-L-glutamine can be used as a direct substitute for L-glutamine. Whereas L-glutamine is labile in cell culture medium and its degradation results in deleterious build-up of ammonia, this dipeptide supplement is very stable with minimal ammonia production.

MEM Nonessential Amino Acid Solution 100x	**30-2116**	**100 ml**

This solution is added as a supplement to minimal basal media. The nonessential amino acids in this solution are 100 times the concentration found in MEM-alpha Medium.

Penicillin Streptomycin Solution	**30-2300**	**100 ml**

10,000 IU/ml penicillin
10,000 µg/ml streptomycin

Penicillin-Streptomycin Solution reduces the chances of microbial contamination in cell culture. Between 0.5 and 1 ml of Penicillin-Streptomycin Solution is added to 100 ml of cell culture media for a final concentration of 50 to 100 IU/ml penicillin and 50 to 100 µg/ml streptomycin. NOTE: Most cell culture technologists avoid using antibiotics for routine culture work. Antibiotics may eliminate susceptible bacteria while permitting mycoplasma to flourish unnoticed or may interfere with the metabolism of sensitive cells in culture. However, one may elect to introduce antibiotics for short periods to primary cultures or as a safeguard while propagating specific valuable stocks.

Penicillin-Streptomycin-Glutamine Solution	**30-2220**	**100 ml**

10,000 IU/ml penicillin
10,000 µg/ml streptomycin
200 mM L-glutamine

This convenient solution allows you to add these common cell culture supplements to your medium in one step, thereby reducing the risk of contamination.

Reagents, Buffers and Stains

	Catalogue No.	Volume
Trypsin EDTA Solution	**30-2101**	**100 ml**

0.25% trypsin, 0.53mM EDTA in Hank's Balanced Salt Solution (HBSS) without calcium chloride or magnesium chloride.

Trypsin-EDTA solution is suitable for the dissociation of most adherent cell lines.

Dulbecco's Phosphate Buffered Saline (DPBS)	**30-2200**	**500 ml**

Without calcium chloride or magnesium chloride

Phosphate Buffered Saline ES Qualified*	**SCRR-2201**	**500 ml**

Without calcium or magnesium

Hanks' Balanced Salt Solution (HBSS)	**30-2213**	**500 ml**

Without calcium chloride, magnesium chloride, or phenol red

Vital Stains

Vital stains are used to determine cell viability. Viable cells will actively exclude these dyes, while nonviable cells (those whose plasma membrane is damaged) will take up the stain and appear red (erythrosin B) or blue (trypan blue) in color.

Erythrosin B Stain Solution	**30-2404**	**40 ml**

0.1% solution in PBS. Cell culture tested.

Erythrosin B Stain Solution gives more accurate results with fewer false negatives and false positives than trypan blue stain. Erythrosin B penetrates nonviable cells immediately; there is no need to wait before counting. Simply mix the stain solution 1:1 with your cell suspension, load into a hemocytometer, and record your data.

Trypan Blue Stain Solution	**30-2402**	**40 ml**

0.4% solution in PBS. Cell culture tested.

** Qualified for mouse and human embryonic stem cells by the ATCC Stem Cell Center*

Water, Cell-Culture Grade	**30-2205**	**500 ml**

ATCC water for cell culture is stringently tested for sterility and meets WFI (water for injection) quality standards. Use it as a diluent or for reconstituting powdered media and salt solutions.

Extracellular Matrix Products

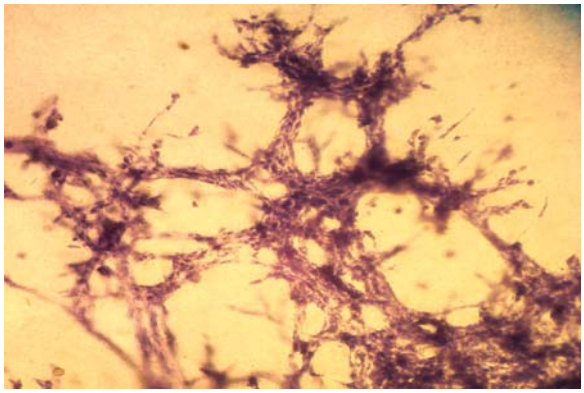
ATCC offers a selection of natural cellular support matrix products to facilitate the growth and differentiation of animal cells in culture. These products are thoroughly tested for optimal performance and greatly enhance cell growth and differentiation by more closely reproducing the in vivo environment of whole tissue.

	Catalogue No.	Volume
Extracellular Matrix Solution	**30-2501**	**5 ml**
Extracellular Matrix Solution, Reduced Growth Factor	**30-2503**	**5 ml**

Extracellular Matrix Solutions are reconstituted basement membrane preparations derived from the Engelbreth-Holm-Swarm (EHS) mouse sarcoma (ATCC® CRL-2108™). Cells can be grown on it as a gelled support layer, embedded within it as a three-dimensional matrix, or embedded within it as a surrogate tissue 'plug' and injected into mice for in vivo studies.

Purified protein solutions from the EHS sarcoma have been used to study the differentiation of various cell types in vitro, to facilitate in vitro invasion assays, to study tumor formation by cell lines in athymic mice, and to study angiogenesis in vitro and in vivo.

The major structural elements of ATCC Extracellular Matrix Solution are laminin, collagen IV, heparan sulfate proteoglycans, and entactin. It also contains tissue plasminogen activator as well as a number of growth factors including TGF-β, EGF, IGF-1, bFGF, and PDGF. A preparation with reduced concentrations of growth factors is also available.



Cellular Attachment Factors

Laminin	**30-2505**	**1 mg**
Collagen IV	**30-2511**	**1 mg**

ATCC Laminin and Collagen IV are also prepared from the EHS mouse sarcoma. Both can be applied as a thin coating on tissue culture dishes to promote the attachment and proliferation of epithelial, endothelial, muscle, and nerve cells.

Hybridoma Development and Cryopreservation

	Catalogue No.	Volume
Polyethylene Glycol (PEG)		
PEG 1450	**50-X**	**5 x 2 g**
PEG 4000	**52-X**	**5 x 2 g**

Polyethylene glycol is used to assist the fusion of myeloma fusion partner cells and spleen cells to form hybridomas. ATCC PEG is supplied sterile and tested for cytotoxicity.

HAT (Hypoxanthine – Aminopterin – Thymidine) 500x concentrate	**69-X**	**5 x 2 ml**

HAT is a medium supplement used to select for hybridomas from among normal cell populations. Each vial of 2 ml is sufficient for 1 liter of cell culture medium. Sterile and cell culture tested.

HT (Hypoxanthine – Thymidine) 500x concentrate	**71-X**	**5 x 2 ml**

HT is a medium supplement used to maintain hybridoma selection in cell culture. Each vial of 2 ml is sufficient for 1 liter of cell culture medium. Sterile and cell culture tested.

Hybri-Care Medium (powder)	**46-X**	**1 liter**

This special medium is formulated to support the growth of hybridomas and fastidious cell lines.

Hybridoma Fusion Partner Cell Lines

ATCC offers over 30 hybridoma fusion partners (B and T cells) derived from human, mouse, and rat. See page 184.

Dimethylsulfoxide (DMSO)	**4-X**	**5 x 5 ml**

DMSO is used as a cryoprotectant in the freezing of cell cultures. The product is cell culture grade and has been tested to ensure cell viability. Each lot is also tested for the absence of bacteria, fungi, and endotoxin.

MTT Cell Proliferation Assay

	Catalogue No.	Quantity
MTT Cell Proliferation Assay Kit	**30-1010K**	**2500 tests**

The ATCC MTT Cell Proliferation Assay Kit provides a rapid and convenient method for determining viable cell number in proliferation, cytotoxicity, cell attachment, chemotaxis, and apoptosis assays. It is particularly suited for high-throughput screening assays using multiwell plates.

The method is a modification to and improvement of the MTT tetrazolium salt assay described by Mosmann. In the assay, the MTT reagent (3,[4,5-dimethylthiazol-2-yl]-2,5-diphenyltetrazolium bromide) is added to cells in culture. During a 4-hour incubation, viable cells convert the MTT tetrazolium salt into an insoluble and brightly colored formazan. The Detergent Reagent is then added to the cells to stop the conversion and solubilize the formazan. The amount of formazan produced is recorded by absorbance at 570 nm using a multiwell plate reader.

The amount of formazan correlates directly with the number of viable cells. However, due to differences between cell types and culture conditions, a standard curve should be established for each cell line.

Features

- **Safe —** No radioactivity or scintillation cocktails
- **Accurate —** Formazan absorbance correlates directly with cell metabolism and cell number
- **Sensitive —** Assays as few as 1,000 cells
- **Rapid —** All reactions occur in the individual multiplate well without washing or harvesting cells
- **Easy to use —** Straightforward, simple procedure with ready-to-use reagents

References

van de Loosdrecht AA et al. J. Immunol. Methods 174(1-2): 311-320, 1994.
Ohno M and Abe T. J. Immunol. Methods 145(1-2): 199-203, 1991.
Ferrari M et al. J. Immunol. Methods 131(2): 165-172, 1990.
Alley MC et al. Cancer Res. 48(3): 589-601, 1988.
Carmichael J et al. Cancer Res. 47(4): 936-42, 1987.
Gerlier D and Thomasset N. J. Immunol. Methods 94(1-2): 57-63, 1986.
Mosmann T. J. Immunol. Methods 65(1-2): 55-63, 1983.

ELF® Phosphatase Detection Kit

	Catalogue No.	Quantity
ELF® Phosphatase Detection Kit for Embryonic Stem Cells	**SCRR-3010**	**60 tests**

The ATCC ELF® Phosphatase Detection Kit for Embryonic Stem Cells offers a reliable, sensitive, and stable assay to determine if stem cells are undifferentiated or are starting to differentiate. Using fluorescent detection of endogenous phosphatase activity in embryonic stem cells, researchers can confidently proceed with experiments knowing that their stem cell populations have been maintained in the undifferentiated state.

- **Robust** — Cleavage of the phosphatase substrate generates a precipitate that will fluoresce yellow-green, indicating phosphatase activity — a marker for the undifferentiated state. The absence of fluorescence indicates differentiation. The fluorescent precipitate is very photostable and will withstand relatively long periods of light exposure, allowing time to examine and image the sample.
- **Easy to use** — The procedure is simple and requires no specialized skills. Staining is visualized through a standard Hoechst/DAPI longpass filter set.
- **Rapid** — The protocol can be completed with visualization of fluorescent signal within 30 minutes.
- **Convenient** — The kit is stable when stored under refrigeration in the dark.
- **Added value** — The precipitate fluorescent signal makes the phosphatase substrate ideal for use in dual and multicolor applications. More comprehensive analyses using multiple stem cell markers can be performed to assess overall in vitro stem cell pluripotency.

Notes

Notes

Section III: Cell Line Indexes

Alphanumeric
Tissue source
Species
Hybridomas
Tumor cell lines by disease
Tumor cell lines by metastatic sites
Tumor/normal matched cell line pairs
Stem cells
Cell lines used as tools and models
Neurobiology
Genetic variant fibroblasts
Immortalized cells
Genes and bioactive compounds

Alphanumeric

This index includes basic information on all ATCC cell lines and hybridomas which are listed in alphanumeric order by name. Complete information about each item including price, propagation instructions and references can be found on the ATCC website. Use the catalogue number to find the entry in the cell biology section of the online catalog.

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
#490	HB-12029†	mouse/mouse	hybridoma	lymphoblast	suspension
(BF1) 8A3.31	HB-9283†	mouse/mouse	hybridoma	lymphoblast	suspension
+/+ (A)	CRL-6470*	mouse	embryo; pooled		adherent
+/+ (B)	CRL-6471*	mouse	embryo; pooled		adherent
+/+ Li	CRL-6467*	mouse	liver		adherent
+/+ MGT	CRL-6468*	mouse	mammary gland; cancer		adherent
+/+ SCT	CRL-6469*	mouse	mixed connective and soft tissue; cancer		adherent
022HU-NSO	CRL-11177†	mouse	myeloma; transfected	epithelial	suspension
10.014 pRSV-T	CRL-11515†	human	eye (cornea)	epithelial	adherent
10-1.D.2	TIB-165	mouse/mouse	hybridoma	lymphoblast	suspension
10-2.16	TIB-93	mouse/mouse	hybridoma	lymphoblast	suspension
10-3.6.2	TIB-92	mouse/mouse	hybridoma	lymphoblast	suspension
104C1	CRL-1405	guinea pig	fetus	fibroblast	adherent
10B9	HB-172	mouse/mouse	hybridoma	lymphoblast	suspension
10C4.1.3	HB-11029†	mouse/mouse	hybridoma	lymphoblast	suspension
10C7	CRL-2430	mouse/mouse	hybridoma	lymphoblast	mixed
10D2F6	HB-11103†	mouse/mouse	hybridoma	lymphoblast	suspension
10E5	HB-8513†	mouse/mouse	hybridoma	lymphoblast	suspension
10F7MN	HB-8162†	mouse/mouse	hybridoma	lymphoblast	suspension
10H2.12.1	HB-11494†	mouse/mouse	hybridoma	lymphoblast	suspension
10P12	CRL-2036	mouse	mast cell; AMLV-induced tumor	mast cell	suspension
10P2	CRL-2034	mouse	mast cell; AMLV-induced tumor	mast cell	suspension
110-5	HB-8984†	mouse/mouse	hybridoma	lymphoblast	suspension
1116-NS-19-9	HB-8059†	mouse/mouse	hybridoma	lymphoblast	suspension
1116NS-3d	CRL-8019†	mouse/mouse	hybridoma	lymphoblast	suspension
11-26c	HB-250	rat/mouse	hybridoma	lymphoblast	suspension
11-4.1	TIB-95	mouse/mouse	hybridoma	lymphoblast	suspension
11-5.2.1.9	TIB-94	mouse/mouse	hybridoma	lymphoblast	suspension
116	HB-9367†	mouse/mouse	hybridoma	lymphoblast	suspension
116-13.1	HB-129	mouse/mouse	hybridoma	lymphoblast	suspension
11B11	HB-188	rat/mouse	hybridoma	lymphoblast	suspension
11E10	CRL-1907	mouse/mouse	hybridoma	lymphoblast	suspension
11F11	CRL-1908	mouse/mouse	hybridoma	lymphoblast	suspension
11P0-1	CRL-2037	mouse	mast cell; AMLV-induced tumor	mast cell	suspension
1205Lu	CRL-2812	human	skin, melanocyte; primary superficial spreading melanoma in vertical growth phase; from lung metastases in mice	spindle-shaped	adherent
12.1	HB-228	mouse/mouse	hybridoma	lymphoblast	suspension
121-19B10	CRL-2652	mouse/mouse	hybridoma	lymphoblast	suspension
12-2-2S (clone 5F11)	HB-50	mouse/mouse	hybridoma	lymphoblast	suspension
123-10	CRL-1707	mouse/mouse	hybridoma	lymphoblast	suspension
123-28	CRL-1713	mouse/mouse	hybridoma	lymphoblast	suspension
12/44	HB-9070†	mouse/mouse	hybridoma	lymphoblast	suspension
12/49	HB-9071†	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.
These products are for laboratory research use only. Not intended for use in humans, animals or for diagnostics.

Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
127H	HB-11911†	mouse/mouse	hybridoma	lymphoblast	suspension
127TAg	CRL-2817	mouse	embryo, fibroblast; immortalized with SV40 large T antigen	fibroblast	adherent
129A3/1	HB-8087†	mouse/mouse	hybridoma	lymphoblast	suspension
12-A-3	CRL-6476*	mouse	embryo; SV40 transformed	epithelial	adherent
12A5B7	HB-8328†	mouse/mouse	hybridoma	lymphoblast	suspension
12MBr6	CRL-1576	monkey, African green	lung (bronchus)	epithelial	adherent
130-3-F7-5	HB-8326†	mouse/mouse	hybridoma	lymphoblast	suspension
130C3/2B/8	HB-8088†	mouse/mouse	hybridoma	lymphoblast	suspension

ATCC Cell Biology Trivia #1

When did ATCC publish its first catalog?

The first ATCC catalogue was published in 1927, two years after ATCC was founded to manage a bacterial collection at the Museum of Natural History in New York. The loss of microbial strains was common until Lore Rogers, chairman of the board of ATCC, pioneered freeze-drying of cultures in the 1940s.

131-94H4	CRL-2739	mouse/mouse	hybridoma	lymphoblast	suspension
132-1C8	CRL-2737	mouse/mouse	hybridoma	lymphoblast	suspension
132C4A/4	HB-8086†	mouse/mouse	hybridoma	lymphoblast	suspension
133-10F6	CRL-2738	mouse/mouse	hybridoma	lymphoblast	suspension
13-5-9-6-2	HB-8934†	mouse/mouse	hybridoma	lymphoblast	suspension
13762 MAT B III	CRL-1666	rat	mammary gland; adenocarcinoma	epithelial	suspension
13.90.2	HB-8337†	mouse/mouse	hybridoma	lymphoblast	suspension
13C4	CRL-1794	mouse/mouse	hybridoma	lymphoblast	suspension
1410 KG7	HB-43	mouse/mouse	hybridoma	lymphoblast	suspension
141PF11	HB-45	mouse/mouse	hybridoma	lymphoblast	suspension
142-24E5	CRL-2649†	mouse/mouse	hybridoma	lymphoblast	mixed
143.98.2	CRL-11226†	human	bone; osteosarcoma		adherent
143-2-A6-11	HB-8325†	mouse/mouse	hybridoma	lymphoblast	suspension
143-4-2	CRL-1970	mouse/mouse	hybridoma	lymphoblast	suspension
143B	CRL-8303†	human	bone; osteosarcoma	fibroblast	adherent
143B PML BK TK	CRL-8304†	human	bone; osteosarcoma	fibroblast	adherent
14-4-4S	HB-32	mouse/mouse	hybridoma	lymphoblast	suspension
145-2C11	CRL-1975	hamster/mouse	hybridoma	lymphoblast	suspension
146-03E04	CRL-2650†	mouse/mouse	hybridoma	lymphoblast	mixed
147-67C6	CRL-2654	mouse/mouse	hybridoma	lymphoblast	suspension
14.8	TIB-164	rat/mouse	hybridoma	lymphoblast	suspension
14E5	HB-174	mouse/mouse	hybridoma	lymphoblast	suspension
151-5-G2-12	HB-8322†	mouse/mouse	hybridoma	lymphoblast	suspension
151-5-G3-5	HB-8323†	mouse/mouse	hybridoma	lymphoblast	suspension
15-1-5P	HB-53	mouse/mouse	hybridoma	lymphoblast	suspension
151-6-A7-9	HB-8324†	mouse/mouse	hybridoma	lymphoblast	suspension
151TAg	CRL-2823	mouse	embryo, fibroblast; immortalized with SV40 large T antigen	fibroblast	adherent
15-3-1S	HB-13	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
15-5-5S	HB-24	mouse/mouse	hybridoma	lymphoblast	suspension
15-79-2	HB-34	mouse/mouse	liver/pre-B lymphoblast hybridoma	lymphoblast	suspension
158.2	HB-8466†	rat/mouse	hybridoma	lymphoblast	suspension
15B2	HB-8510†	mouse/mouse	hybridoma	lymphoblast	suspension
15C6	CRL-2431	mouse/mouse	hybridoma	lymphoblast	suspension
15C6	HB-326	rat/mouse	hybridoma	lymphoblast	mixed
15F3-1	HB-47	mouse/mouse	hybridoma	lymphoblast	suspension
15F7	HB-322	rat/mouse	hybridoma	lymphoblast	mixed
15P-1	CRL-2618	mouse (transgenic)	testis, Sertoli cells; expresses polyoma virus large T protein		adherent
16-10A1	HB-301	hamster/mouse	hybridoma	lymphoblast	suspension
16-1-11N	HB-16	mouse/mouse	hybridoma	lymphoblast	suspension
16-1-2N	HB-14	mouse/mouse	hybridoma	lymphoblast	suspension
162-21.2	HB-241	mouse/mouse	hybridoma	lymphoblast	suspension
162-46.2	HB-187	mouse/mouse	hybridoma	lymphoblast	suspension
16-3-1N	HB-25	mouse/mouse	hybridoma	lymphoblast	suspension
16-3-22S	HB-5	mouse/mouse	hybridoma	lymphoblast	suspension
166-ME SK	CRL-1533	human	skin; hereditary adenomatosis (Gardner's variant)	fibroblast	adherent
16H3	CRL-2385	mouse/mouse	hybridoma	lymphoblast	suspension
16M3F10	HB-8363†	human/mouse	hybridoma	lymphoblast	suspension
171-11B9	CRL-2661	mouse/mouse	hybridoma	lymphoblast	suspension
171-4	HB-296	mouse/mouse	hybridoma	lymphoblast	suspension
17/14	HB-8153†	mouse/mouse	hybridoma	lymphoblast	suspension
172-12A4	CRL-2660	mouse/mouse	hybridoma	lymphoblast	suspension
173-1C11	CRL-2659	mouse/mouse	hybridoma	lymphoblast	suspension
17-3-3S	HB-6	mouse/mouse	hybridoma	lymphoblast	suspension
17aba	HB-248	mouse/mouse	hybridoma	lymphoblast	suspension
17D	HB-262	mouse/mouse	hybridoma	lymphoblast	suspension
182-PF SK	CRL-1532	human	skin; hereditary adenomatosis	fibroblast	adherent
184A1	CRL-8798†	human	mammary gland, epithelium; chemically transformed	epithelial	adherent
184B5	CRL-8799†	human	mammary gland, epithelium; chemically transformed	epithelial	adherent
187.1	HB-58	rat/mouse	hybridoma	lymphoblast	suspension
18C2.8.3	HB-9571†	mouse/mouse	hybridoma	lymphoblast	suspension
1939-3G5	HB-8133†	mouse/mouse	hybridoma	lymphoblast	suspension
1939-8G2	HB-8134†	mouse/mouse	hybridoma	lymphoblast	suspension
19F8	HB-321	rat/mouse	hybridoma	lymphoblast	mixed
1A2	CRL-8119†	human	B lymphoblast; lymphoma	lymphoblast	suspension
$1A_3$	HB-8563†	mouse/mouse	hybridoma	lymphoblast	suspension
1A3.1	CRL-1961	mouse/mouse	hybridoma	lymphoblast	suspension
1A3.3.13	HB-11894†	mouse/mouse	hybridoma	lymphoblast	suspension
1A6	CRL-2742†	human	bladder; carcinoma; produces p-CSF	epithelial	adherent
1B2-1B7	TIB-189	mouse/mouse	hybridoma	lymphoblast	suspension
1B2A3	CRL-1965	mouse/mouse	hybridoma	lymphoblast	suspension
1B7.11	TIB-191	mouse/mouse	hybridoma	lymphoblast	suspension
1B8-F11	CRL-1852	mouse/mouse	hybridoma	lymphoblast	suspension
1C3	CRL-2441	mouse/mouse	hybridoma	lymphoblast	suspension
1C6	HB-12330†	mouse/mouse	hybridoma		suspension
1D11.16.8	HB-9849†	mouse/mouse	hybridoma	lymphoblast	suspension
1D3	HB-305	rat/mouse	hybridoma	lymphoblast	suspension
1D4	HB-8068†	mouse/mouse	hybridoma	lymphoblast	suspension
1F5	HB-9645†	mouse/mouse	hybridoma	lymphoblast	suspension
1G1	HB-12624†	mouse/mouse	hybridoma	lymphoblast	suspension
1G10	CRL-2223	rat/mouse	hybridoma	lymphoblast	suspension
1G12	CRL-2827	mouse/mouse	hybridoma	lymphoblast	suspension
1G2	CRL-13005†	human	kidney, peripheral blood; somatic cell hybrid; Burkitt's lymphoma	epithelial	adherent
1G3	CRL-2434	mouse/mouse	hybridoma	lymphoblast	mixed
1G8	CRL-2756	channel catfish	peripheral blood, B lymphoblast	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
1H10-6	HB-48	mouse/mouse	hybridoma	lymphoblast	suspension
1H11	HB-10611†	mouse/mouse	hybridoma	lymphoblast	suspension
1H3	HB-284	mouse/mouse	hybridoma	lymphoblast	suspension
2.03.7	HB-8389†	mouse/mouse	hybridoma	lymphoblast	suspension
2.040 pRSV-T	CRL-11516†	human	eye (cornea); immortalized with SV40 early region	epithelial	adherent
2.28 M1	HB-166	mouse/mouse	hybridoma	lymphoblast	suspension
2.43	TIB-210	rat/mouse	hybridoma	lymphoblast	suspension
2.4G2	HB-197	rat/mouse	hybridoma	lymphoblast	suspension
200-3-G6-4	HB-8737†	mouse/mouse	hybridoma	lymphoblast	suspension
20-10-5S	HB-23	mouse/mouse	hybridoma	lymphoblast	suspension
201-45E9	CRL-2670	mouse/mouse	hybridoma	lymphoblast	suspension
2018	CRL-10907†	mouse	liver; stroma	fibroblast	adherent
202-11A8	CRL-2669	mouse/mouse	hybridoma	lymphoblast	suspension
20.3	CRL-2655†	mouse/mouse	hybridoma	lymphoblast	suspension
203-7D10	CRL-2651†	mouse/mouse	hybridoma	lymphoblast	mixed
204-4	HB-185	mouse/mouse	hybridoma	lymphoblast	suspension
20-8-4S	HB-11	mouse/mouse	hybridoma	lymphoblast	suspension
20B8	CRL-12582†	human	kidney, B cell; Burkitt's lymphoma		adherent
20C2	CRL-2382	rat/mouse	hybridoma	lymphoblast	suspension
20H11	CRL-9300†	human	spleen, B lymphocyte; EBV transformed	lymphoblast	suspension
20H2	HB-323	rat/mouse	hybridoma	lymphoblast	mixed
219	HB-9371†	mouse/mouse	hybridoma	lymphoblast	suspension
225	HB-8508†	mouse/mouse	hybridoma	lymphoblast	suspension
2254-62.2	CRL-8544†	hamster, Syrian golden	kidney	fibroblast	adherent
226H	HB-12592†	mouse/mouse	hybridoma	lymphoblast	suspension
22Rv1	CRL-2505	human	prostate; carcinoma	epithelial	adherent
232	HB-9372†	mouse/mouse	hybridoma	lymphoblast	suspension
236L	HB-12593†	mouse/mouse	hybridoma	lymphoblast	suspension
23A-5-21S	HB-36	mouse/mouse	hybridoma	lymphoblast	suspension
23B6	HB-8521†	rat/mouse	hybridoma	lymphoblast	suspension
23 ScCr	CRL-2751	mouse	bone marrow	macrophage	adherent
240-13D10	CRL-2672	mouse/mouse	hybridoma	lymphoblast	suspension
$24IA_2E_2E_{10}D_5$	HB-8049†	mouse/mouse	hybridoma	lymphoblast	suspension
25-5-16S	HB-37	mouse/mouse	hybridoma	lymphoblast	suspension
25-9-17S II	HB-26	mouse/mouse	hybridoma	lymphoblast	suspension
25-9-3S	HB-38	mouse/mouse	hybridoma	lymphoblast	suspension
260-33C4	CRL-2667	mouse/mouse	hybridoma	lymphoblast	suspension
266-6	CRL-2151	mouse	pancreas; acinar cell tumor	epithelial	adherent
26-7-11S	HB-15	mouse/mouse	hybridoma	lymphoblast	suspension
26-8-16S	HB-42	mouse/mouse	hybridoma	lymphoblast	suspension
26CB-1	CRL-1495	baboon, African	spleen, lymphoblast; HVS transformed	lymphoblast	suspension
26ic	HB-246	mouse/mouse	hybridoma	lymphoblast	suspension
28-11-5S	HB-19	mouse/mouse	hybridoma	lymphoblast	suspension
28-13-3S	HB-41	mouse/mouse	hybridoma	lymphoblast	suspension
28-14-8S	HB-27	mouse/mouse	hybridoma	lymphoblast	suspension
28-16-8S	HB-35	mouse/mouse	hybridoma	lymphoblast	suspension
283TAg	CRL-2822	mouse	embryo, fibroblast; immortalized with SV40 large T antigen	fibroblast	adherent
28-8-6S	HB-51	mouse/mouse	hybridoma	lymphoblast	suspension
28S.3	CRL-2758	channel catfish	peripheral blood, T lymphoblast	lymphoblast	suspension
290-4E10	CRL-2662	mouse/mouse	hybridoma	lymphoblast	suspension
293	CRL-1573	human	kidney, fetal	epithelial	adherent
293 c18	CRL-10852†	human	kidney; high transfection frequencies	epithelial	adherent
293/CHE-Fc	CRL-2368	human	kidney; produces soluble CHE-Fc	epithelial	adherent
293 EcR Shh	CRL-2782	human	kidney; transformed with adenovirus 5 DNA	epithelial	adherent
293T/17	CRL-11268†	human	kidney; highly transfective	epithelial	adherent
2A	CRL-12013†	human	kidney; amphotropic retroviral packaging line	epithelial	adherent
2A11	CRL-2442	mouse/mouse	hybridoma	lymphoblast	suspension
2A2-6E10-1D8	HB-12465†	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
2A3A1H	HB-8555†	mouse/mouse	hybridoma	lymphoblast	suspension
2A5	CRL-2444	mouse/mouse	hybridoma	lymphoblast	suspension
2AB1-IA10	HB-8210†	rat/mouse	hybridoma	lymphoblast	suspension
2B5	HB-8963†	mouse/mouse	hybridoma	lymphoblast	suspension
2B5.3	CRL-1960	mouse/mouse	hybridoma	lymphoblast	suspension
2B7	CRL-2443	mouse/mouse	hybridoma	lymphoblast	suspension
2B8	CRL-12569†	human	ascites, B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
2BD4E4 K99	HB-8178†	mouse/mouse	hybridoma	lymphoblast	suspension
2C1H7	CRL-2746†	mouse/mouse	hybridoma	lymphoblast	suspension
2C4	CRL-1760	mouse/mouse	hybridoma	lymphoblast	suspension
2C5-6	HB-8995†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells

ATCC Cell Biology Trivia #2

How many pea plants did Gregor Mendel cross-breed in an 8 year period?

Between 1856 and 1863 Mendel and his assistants cross-bred 30,000 pea plants and noted the appearance of the progeny, laying the groundwork for the field of genetics. His work was the model of meticulous record-keeping.

2D10	CRL-2226	rat/mouse	hybridoma	lymphoblast	suspension
2D12	CRL-1689	mouse/mouse	hybridoma	lymphoblast	suspension
2D4	TIB-185	mouse/mouse	hybridoma	lymphoblast	suspension
2D-7	HB-9667†	mouse/mouse	hybridoma	lymphoblast	suspension
2D7F10	CRL-2025	mouse/mouse	hybridoma	lymphoblast	suspension
2E10-H2	CRL-1812	mouse/mouse	hybridoma	lymphoblast	suspension
2E.6	HB-128	rat/mouse	hybridoma	lymphoblast	suspension
2E6	HB-226	hamster/mouse	hybridoma	lymphoblast	suspension
2E8	TIB-239	mouse	bone marrow	lymphoblast	suspension
2F.11.15	TIB-194	mouse/mouse	hybridoma	lymphoblast	suspension
2F-2B	CRL-2168	mouse	axillary lymph node, vascular epithelium; SV40 transformed	epithelial	adherent
2F7	CRL-10237†	human	lymph node; Burkitt's lymphoma	lymphoblast	suspension
2FLB.Ln	CRL-6045*	bovine	lymph node; leukemia		
2G3	CRL-2435	mouse/mouse	hybridoma	lymphoblast	mixed
2G8.D6	HB-8190†	mouse/mouse	hybridoma	lymphoblast	suspension
2H-11	CRL-2163	mouse	axillary lymph node, vascular epithelium; SV40 transformed	epithelial	adherent
2H6-C2	CRL-1853	mouse/mouse	hybridoma	lymphoblast	suspension
2Hx-2	HB-8117†	mouse/mouse	hybridoma	lymphoblast	suspension
2LBLN	CRL-6047*	bovine	lymph node		
2PK-3	TIB-203	mouse	B lymphocyte; lymphoma	lymphoblast	suspension
2T8-3E10	HB-8213†	mouse/mouse	hybridoma	lymphoblast	suspension
2V6.11	CRL-2784	human	kidney; transformed with adenovirus 5 DNA	epithelial	adherent
30/15	HB-8152†	mouse/mouse	hybridoma	lymphoblast	suspension
30-5-7S	HB-31	mouse/mouse	hybridoma	lymphoblast	suspension
308TAg	CRL-2819	mouse	embryo, fibroblast; immortalized with SV40 large T antigen	fibroblast	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
30-C7	TIB-106	rat/mouse	hybridoma	lymphoblast	suspension
30-H12	TIB-107	rat/mouse	hybridoma	lymphoblast	suspension
310-29F7	CRL-2656	mouse/mouse	hybridoma	lymphoblast	suspension
311-3D4	CRL-2657	mouse/mouse	hybridoma	lymphoblast	mixed
312-13E8	CRL-2658	mouse/mouse	hybridoma	lymphoblast	suspension
31-3-4S	HB-77	mouse/mouse	hybridoma	lymphoblast	suspension
31-42-19	HB-9726†	mouse/mouse	hybridoma	lymphoblast	suspension
3.155	TIB-211	rat/mouse	hybridoma	lymphoblast	suspension
317G5.C1D3	HB-8691†	mouse/mouse	hybridoma	lymphoblast	suspension
31-90-25	HB-9725†	mouse/mouse	hybridoma	lymphoblast	suspension
3197-3	CRL-1568	mouse	embryo	fibroblast	adherent
31E9	HB-11052†	human/human	hybridoma; produces GIF	lymphoblast	suspension
32.2	HB-9469†	mouse/mouse	hybridoma	lymphoblast	suspension
32B11	CRL-2559	mouse/mouse	hybridoma	lymphoblast	suspension
32D Clone 3	CRL-11346†	mouse	bone marrow	lymphoblast	mixed
331.12	TIB-129	rat/mouse	hybridoma	lymphoblast	suspension
339-1	HB-186	mouse/mouse	hybridoma	lymphoblast	suspension
33D1	TIB-227	rat/mouse	hybridoma	lymphoblast	suspension
34	CRL-1889	mouse/mouse	hybridoma	lymphoblast	suspension
34-1-2S	HB-79	mouse/mouse	hybridoma	lymphoblast	suspension
34-2-12S	HB-87	mouse/mouse	hybridoma	lymphoblast	suspension
34-4-20S	HB-75	mouse/mouse	hybridoma	lymphoblast	suspension
34-4-21S	HB-76	mouse/mouse	hybridoma	lymphoblast	suspension
34-5-3S	HB-85	mouse/mouse	hybridoma	lymphoblast	suspension
34-5-8S	HB-102	mouse/mouse	hybridoma	lymphoblast	suspension
34-7-23S	HB-101	mouse/mouse	hybridoma	lymphoblast	suspension
35.1	HB-222	mouse/mouse	hybridoma	lymphoblast	suspension
35.6	CRL-10052†	hamster, Chinese	ovary; produces human CR1	epithelial	adherent
356-1	HB-181	mouse/mouse	hybridoma	lymphoblast	suspension
36	CRL-8193†	human/mouse	hybridoma fusion partner	lymphoblast	suspension
36.5 (CD8+)	CRL-11116†	mouse	embryonic stem cell; pluripotent; null for Lyt-2 (CD8) expression	epithelial	adherent on feeder cells
36F-18C	HB-285	mouse/mouse	hybridoma	lymphoblast	suspension
37.04.12	HB-9312†	mouse/mouse	hybridoma	lymphoblast	suspension
372	CRL-1893	mouse/mouse	hybridoma	lymphoblast	suspension
38.1	HB-231	mouse/mouse	hybridoma	lymphoblast	suspension
38-1	HB-182	mouse/mouse	hybridoma	lymphoblast	suspension
3-83P	HB-20	mouse/mouse	hybridoma	lymphoblast	suspension
39-S	HB-8180†	mouse/mouse	hybridoma	lymphoblast	suspension
3A(tPA-30-1)	CRL-1583	human	placenta		adherent
3A5	CRL-2440	mouse/mouse	hybridoma	lymphoblast	suspension
3A8	HB-12024†	mouse/mouse	hybridoma	lymphoblast	suspension
3A-sub E [post crisis of 3A(tPA-30-1)]	CRL-1584	human	placenta		adherent
3B-11	CRL-2160	mouse	axillary lymph node, vascular epithelium; SV40 transformed	epithelial	adherent
3B11	CRL-2757	channel catfish	peripheral blood, B lymphoblast	lymphoblast	suspension
3B18	HB-8654†	mouse/mouse	hybridoma	lymphoblast	mixed
3C10	TIB-228	mouse/mouse	hybridoma	lymphoblast	suspension
3C11	HB-8511†	mouse/mouse	hybridoma	lymphoblast	suspension
3C5.1	CRL-2284	mouse/mouse	hybridoma	lymphoblast	suspension
3C7.2	CRL-1959	mouse/mouse	hybridoma	lymphoblast	suspension
3C9-D11-H11	CRL-1745	mouse/mouse	hybridoma	lymphoblast	suspension
3E1	HB-8067†	mouse/mouse	hybridoma	lymphoblast	suspension
3F6	HB-8512†	mouse/mouse	hybridoma	lymphoblast	suspension
3G3	HB-8516†	mouse/mouse	hybridoma	lymphoblast	suspension
3G5	CRL-1814	mouse/mouse	hybridoma	lymphoblast	suspension
3G9F3	CRL-1843	mouse/mouse	hybridoma	lymphoblast	suspension
3H5-1	HB-46	mouse/mouse	hybridoma	lymphoblast	suspension
3LBLN	CRL-6048*	bovine	lymph node		
3Pt12B8	HB-8136†	mouse/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
3T3-L1	CL-173	mouse	embryo	fibroblast	adherent
3T3 MEFs KO	CRL-2753	mouse	embryo; Cav-1 (–/–)	fibroblast	adherent
3T3 MEFs WT	CRL-2752	mouse	embryo; Cav-1 (+/+)	fibroblast	adherent
3T3-Swiss albino	CCL-92	mouse	embryo; feeder layer cell	fibroblast	adherent
3T6-Swiss albino	CCL-96	mouse	embryo	fibroblast	adherent
4/4 R.M.-4	CCL-216	rat	visceral pleura	epithelial	adherent
40.10.09	HB-9311†	mouse/mouse	hybridoma	lymphoblast	suspension
411-14E10	CRL-2663	mouse/mouse	hybridoma	lymphoblast	suspension
41-2	CRL-2695†	mouse/mouse	hybridoma	lymphoblast	suspension
41-3.48	HB-130	mouse/mouse	hybridoma	lymphoblast	suspension
413-15D12	CRL-2653	mouse/mouse	hybridoma	lymphoblast	suspension
42.08.07	HB-9313†	mouse/mouse	hybridoma	lymphoblast	suspension
42TA	CRL-2759	channel catfish	peripheral blood, macrophage	macrophage	mixed
443-15D3-2F12	HB-11342†	mouse/mouse	hybridoma	lymphoblast	suspension
448-D 100, 10, 1	HB-10895†	human/(human x mouse)	hybridoma	lymphoblast	suspension
44aacb	HB-249	mouse/mouse	hybridoma	lymphoblast	suspension
451Lu	CRL-2813	human	skin, melanocyte; nodular melanoma in vertical growth phase; from lung metastases in mice	spindle-shaped	adherent
45.6.TG1.7	CRL-1608	mouse	hybridoma fusion partner	lymphoblast	suspension
454C11	HB-8484†	mouse/mouse	hybridoma	lymphoblast	suspension
455	HB-8507†	mouse/mouse	hybridoma	lymphoblast	suspension
46-2	CRL-2186	mouse/mouse	hybridoma	lymphoblast	suspension
46/4	HB-67	mouse/mouse	hybridoma	lymphoblast	suspension
46-4	CRL-2178	mouse/mouse	hybridoma	lymphoblast	suspension
46-5	CRL-2184	mouse/mouse	hybridoma	lymphoblast	suspension
48	CRL-1913	mouse/mouse	hybridoma	lymphoblast	suspension
4A4B11	HB-8327†	mouse/mouse	hybridoma	lymphoblast	suspension
4A6	CRL-1928	mouse/mouse	hybridoma	lymphoblast	suspension
4B2	HB-196	mouse/mouse	hybridoma	lymphoblast	suspension
4B2-6C3-1C9	HB-12466†	mouse/mouse	hybridoma	lymphoblast	suspension
4C	HB-8311†	mouse/mouse	hybridoma	lymphoblast	suspension
4C2.4A7.5H11	CRL-2744	mouse/mouse	hybridoma	lymphoblast	suspension
4C4	HB-327	rat/mouse	hybridoma	lymphoblast	mixed
4C5G	CRL-2538	mouse/mouse	hybridoma	lymphoblast	suspension
4C9	CRL-2437	mouse/mouse	hybridoma	lymphoblast	suspension
4D1.5.7	HB-11495†	mouse/mouse	hybridoma	lymphoblast	suspension
4D11	HB-240	rat/mouse	hybridoma	lymphoblast	suspension
4D12	HB-178	mouse/mouse	hybridoma	lymphoblast	suspension
4D9D4	CRL-1818	mouse/mouse	hybridoma	lymphoblast	suspension
4E11	HB-9259†	mouse/mouse	hybridoma	lymphoblast	suspension
4E8C12	HB-10452†	mouse/mouse	hybridoma	lymphoblast	suspension
4F2C13	HB-22	mouse/mouse	hybridoma	lymphoblast	suspension
4H1-A7	CRL-1813	mouse/mouse	hybridoma	lymphoblast	suspension
4MBr-5	CCL-208	monkey, Rhesus	lung (bronchus)	epithelial	adherent
4T1	CRL-2539	mouse	mammary gland tumor; metastatic tumor model	epithelial	adherent
5/9 m α3-18	CRL-10154†	hamster, Chinese	ovary; produces human M-CSF	epithelial	adherent
50-6	CRL-2696†	mouse/mouse	hybridoma	lymphoblast	suspension
51.1	HB-230	mouse/mouse	hybridoma	lymphoblast	suspension
514	CRL-1914	mouse/mouse	hybridoma	lymphoblast	suspension
52	HB-9361†	mouse/mouse	hybridoma	lymphoblast	suspension
520C9	HB-8696†	mouse/mouse	hybridoma	lymphoblast	suspension
528	HB-8509†	mouse/mouse	hybridoma	lymphoblast	suspension
52-S	HB-8181†	mouse/mouse	hybridoma	lymphoblast	suspension
53-6.72	TIB-105	rat/mouse	hybridoma	lymphoblast	suspension
53-7.313	TIB-104	rat/mouse	hybridoma	lymphoblast	suspension
53-S	HB-8182†	mouse/mouse	hybridoma	lymphoblast	suspension
548	CRL-1890	mouse/mouse	hybridoma	lymphoblast	suspension
55-2	CRL-2155	mouse/mouse	hybridoma	lymphoblast	suspension
55-36	CRL-2153	mouse/mouse	hybridoma	lymphoblast	suspension
55-6	CRL-2156	mouse/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
55-83	CRL-2185	mouse/mouse	hybridoma	lymphoblast	suspension
558-D 100, 10, 1	HB-10894†	human/(human x mouse)	hybridoma	lymphoblast	suspension
559/64-D 100, 10, 1	HB-10893†	human/(human x mouse)	hybridoma	lymphoblast	suspension
5637	HTB-9	human	urinary bladder; carcinoma	epithelial	adherent
56B3	CRL-2542†	mouse	embryonic stem cell; disrupted *lck* gene		adherent on feeder cells
579	HB-8506†	mouse/mouse	hybridoma	lymphoblast	suspension
58-S	HB-8183†	mouse/mouse	hybridoma	lymphoblast	suspension
5A1	CRL-2702	rat/rat	hybridoma	lymphoblast	suspension
5C6 Clone 1	CRL-1969	rat/mouse	hybridoma	lymphoblast	suspension
5c8	HB-10916†	mouse/mouse	hybridoma	lymphoblast	suspension
5C9	HB-8371†	mouse/mouse	hybridoma	lymphoblast	suspension
5D4-11	HB-49	mouse/mouse	hybridoma	lymphoblast	suspension
5D5.11.6	HB-11895†	mouse/mouse	hybridoma	lymphoblast	suspension
5E4	CRL-2635	mouse/mouse	hybridoma	lymphoblast	suspension
5E9C11	HB-21	mouse/mouse	hybridoma	lymphoblast	suspension
5F12 AD3	HB-8209†	mouse/mouse	hybridoma	lymphoblast	suspension
5G5	CRL-2633	mouse/mouse	hybridoma	lymphoblast	suspension
5H8	CRL-2646	mouse/mouse	hybridoma	lymphoblast	suspension
5LBLN	CRL-6049*	bovine	lymph node		
60bca	HB-247	mouse/mouse	hybridoma	lymphoblast	suspension
6.12	CRL-13006†	mouse	somatic cell hybrid	lymphoblast	suspension
61/7	HB-8154†	mouse/mouse	hybridoma	lymphoblast	suspension
6-23 (Clone 6)	CRL-1607	rat	thyroid; medullary thyroid carcinoma		adherent
63D3	HB-44	mouse/mouse	hybridoma	lymphoblast	suspension
650E2-2B12	HB-10812†	mouse/mouse	hybridoma	lymphoblast	suspension
68-1-2	CRL-1712	mouse/mouse	hybridoma	lymphoblast	suspension
6A7M	HB-8159†	mouse/mouse	hybridoma	lymphoblast	suspension
6A8.6F10.1A6	CRL-2743	mouse/mouse	hybridoma	lymphoblast	suspension
6D8MB4	CRL-1842	mouse/mouse	hybridoma	lymphoblast	suspension
6E6	CRL-11398†	hamster, Chinese	ovary; produces 23FG2; anti CD18 Mab	epithelial	adherent
6F4C5	CRL-1869	mouse/mouse	hybridoma	lymphoblast	suspension
6G4.2.5	HB-11722†	mouse/mouse	hybridoma	lymphoblast	suspension
6LBLN	CRL-6050*	bovine	lymph node		
703D4	HB-8301†	mouse/mouse	hybridoma	lymphoblast	suspension
70Z/3	TIB-158	mouse	pre-B lymphoblast; methylnitrosourea-induced lymphoma	lymphoblast	suspension
71A7	TIB-147	mouse/mouse	hybridoma	lymphoblast	suspension
72A1	HB-168	mouse/mouse	hybridoma	lymphoblast	suspension
73/1	HB-66	mouse/mouse	hybridoma	lymphoblast	suspension
7-34-1	CRL-1945	mouse/mouse	hybridoma	lymphoblast	suspension
74-11-10	HB-139	mouse/mouse	hybridoma	lymphoblast	suspension
74-12-4	HB-147	mouse/mouse	hybridoma	lymphoblast	suspension
74-22-15	HB-142	mouse/mouse	hybridoma	lymphoblast	suspension
74-22-15A	HB-142.1	mouse/mouse	hybridoma	lymphoblast	suspension
74-9-3	HB-156	mouse/mouse	hybridoma	lymphoblast	suspension
76-2-11	HB-143	mouse/mouse	hybridoma	lymphoblast	suspension
76-5-28	HB-153	mouse/mouse	hybridoma	lymphoblast	suspension
76-6-7	HB-141	mouse/mouse	hybridoma	lymphoblast	suspension
76-7-4	HB-140	mouse/mouse	hybridoma	lymphoblast	suspension
769-P	CRL-1933	human	kidney; renal cell adenocarcinoma	epithelial	adherent
786-O	CRL-1932	human	kidney; renal cell adenocarcinoma	epithelial	adherent
7A9	HB-10135†	mouse/mouse	hybridoma	lymphoblast	suspension
7AC5/EYFP	SCRC-1033	mouse	embryo; embryonic stem cell		adherent
$7C_2C_5C_{12}$	HB-8678†	mouse/mouse	hybridoma	lymphoblast	suspension
7C6.5.4	HB-9574†	mouse/mouse	hybridoma	lymphoblast	suspension
7C8	HB-8465†	mouse/mouse	hybridoma	lymphoblast	suspension
7D2-1.4.1.5	HB-92	rat/mouse	hybridoma	lymphoblast	suspension with feeder cells

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
7D3A.2	CRL-1886	mouse/mouse	hybridoma	lymphoblast	suspension
7D4	CRL-1698	rat/mouse	hybridoma	lymphoblast	suspension
7E11C5	HB-10494†	mouse/mouse	hybridoma	lymphoblast	suspension
7E12H12	HB-9397†	mouse/mouse	hybridoma	lymphoblast	suspension
7E3	HB-8832†	mouse/mouse	hybridoma	lymphoblast	suspension
7F2	CRL-12557†	mouse	bone marrow; osteoblast; inducible adipocyte differentiation model	fibroblast	adherent
7F2-6D4-8E7	HB-11945†	mouse/mouse	hybridoma	lymphoblast	suspension
7G7B6	HB-8784†	mouse/mouse	hybridoma	lymphoblast	suspension
80 V 5B4	TIB-132	mouse/mouse	hybridoma	lymphoblast	suspension
803-15.6	CRL-2395	mouse/mouse	hybridoma	lymphoblast	suspension
807.15	CRL-2287	mouse/mouse	hybridoma	lymphoblast	suspension
807.31	CRL-2282	mouse/mouse	hybridoma	lymphoblast	suspension
807.33	CRL-2290	mouse/mouse	hybridoma	lymphoblast	suspension
80T	CRL-7901*	human	unknown	fibroblast	adherent
83-12-5	CRL-1971	mouse/mouse	hybridoma	lymphoblast	suspension
86D	HB-286	mouse/mouse	hybridoma	lymphoblast	suspension
88B	CRL-1967	mouse/mouse	hybridoma	lymphoblast	suspension
88TAg	CRL-2820	mouse	embryo, fibroblast; immortalized with SV40 large T antigen	fibroblast	adherent
89MS30	HB-11300†	mouse/mouse	hybridoma	lymphoblast	suspension
8A2N	HB-8161†	mouse/mouse	hybridoma	lymphoblast	suspension
8A3B.6	CRL-1875	mouse/mouse	hybridoma	lymphoblast	suspension
8B1B.1	CRL-1877	mouse/mouse	hybridoma	lymphoblast	suspension
8E5	CRL-8993†	human	peripheral blood, B lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
8E7	CRL-8795†	human	spleen; B lymphoblast; EBV transformed	lymphoblast	suspension
90196B	CRL-9853†	human	spleen; macrophage; monocyte	monocyte/ macrophage	suspension
90.74	CRL-11654†	human	kidney; transformed with adenovirus 5 DNA; packaging cell line	epithelial	adherent
91MS441	HB-11301†	mouse/mouse	hybridoma	lymphoblast	suspension
92TAg	CRL-2816	mouse	embryo, fibroblast; immortalized with SV40 large T antigen	fibroblast	adherent
9.3F10	HB-180	mouse/mouse	hybridoma	lymphoblast	suspension
9.4	HB-10508†	mouse/mouse	hybridoma	lymphoblast	suspension
9-4-3	HB-8935†	mouse/mouse	hybridoma	lymphoblast	suspension
9-A5	CRL-1844	mouse/mouse	hybridoma	lymphoblast	suspension
9AE10	CRL-1761	mouse/mouse	hybridoma	lymphoblast	suspension
9-B1	CRL-1845	mouse/mouse	hybridoma	lymphoblast	suspension
9BG5	HB-167	mouse/mouse	hybridoma	lymphoblast	suspension
9D10	CRL-8752†	human	spleen, B lymphocyte; EBV transformed	lymphoblast	suspension
9D9	CRL-1703	mouse/mouse	hybridoma	lymphoblast	suspension
9F12	HB-8177†	human/mouse	hybridoma	lymphoblast	suspension
9L/lacZ	CRL-2200	rat	brain; gliosarcoma; expresses beta-galactosidase	fibroblast	adherent
9TR#1	CRL-11379†	mouse	embryonic stem cell; disrupted TNFR p55 gene	epithelial	adherent on feeder cells
α Intermediate filament	TIB-131	mouse/mouse	hybridoma	lymphoblast	suspension
A.P.	CRL-6295*	mongoose, African water	skin	fibroblast	adherent
A-10	CRL-1476	rat	thoracic aorta, medial layer	myoblast	adherent
A101D	CRL-7898*	human	skin; melanoma	epithelial	adherent
A11.1 M	HB-164	mouse/mouse	hybridoma	lymphoblast	suspension
A123	HB-8451†	mouse/mouse	hybridoma	lymphoblast	suspension
A124	HB-8452†	mouse/mouse	hybridoma	lymphoblast	suspension
A172	CRL-1620	human	brain; glioblastoma		adherent
A1G3	HB-177	mouse/mouse	hybridoma	lymphoblast	suspension
A20	TIB-208	mouse	B lymphocyte; reticulum cell sarcoma	lymphoblast	suspension
A-204	HTB-82	human	muscle; rhabdomyosarcoma	epithelial	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
A2058	CRL-11147†	human	lymph node (metastasis); malignant melanoma (skin primary)	epithelial	adherent
A253	CRL-7902*	human	epidermis; epidermoid carcinoma	epithelial	adherent
A-253	HTB-41	human	submaxillary salivary gland; epidermoid carcinoma	epithelial	adherent
A2B5 clone 105	CRL-1520	mouse/mouse	hybridoma	lymphoblast	suspension
A2E11	CRL-1846	mouse/mouse	hybridoma	lymphoblast	suspension
A3	CRL-2570	human	T lymphocyte; control for I 9.2 and I 2.1 *Fas*-mediated apoptosis models	lymphoblast	suspension
A3.4H2	HB-12319†	mouse/mouse	hybridoma	lymphoblast	suspension
A3.6B10	HB-12318†	mouse/mouse	hybridoma	lymphoblast	suspension
A-375	CRL-1619	human	skin; malignant melanoma		adherent
A375.S2	CRL-1872	human	skin; malignant melanoma		adherent
A388	CRL-7905*	human	lymph nodes (metastasis); carcinoma, epidermoid (unknown primary)	epithelial	adherent
A4.74	CRL-2041	mouse/mouse	hybridoma	lymphoblast	suspension
A4.840	CRL-2043	mouse/mouse	hybridoma	lymphoblast	suspension
A4.951	CRL-2046	mouse/mouse	hybridoma	lymphoblast	suspension
A-427	HTB-53	human	lung; carcinoma	epithelial	adherent
A-431	CRL-1555	human	epidermis; epidermoid carcinoma	epithelial	adherent
A431NS	CRL-2592	human	epidermis; epidermoid carcinoma	epithelial	adherent
A-498	HTB-44	human	kidney; carcinoma	epithelial	adherent
A5.12.14	HB-11553†	mouse/mouse	hybridoma	lymphoblast	suspension
A5.4	CRL-2275	mouse/mouse	hybridoma	lymphoblast	suspension
A549	CCL-185	human	lung; carcinoma	epithelial	adherent
A6	CRL-8192†	human/mouse	hybridoma fusion partner	lymphoblast	suspension
A6	CCL-102	toad, South African clawed	kidney	epithelial	adherent
A-673	CRL-1598	human	muscle; rhabdomyosarcoma	fibroblast	adherent
A68177	CRL-7714*	human	skin; xeroderma pigmentosum	fibroblast	adherent
A7	CRL-2500	human	skin; melanoma; transfected to express filamin-1	melanocytic	adherent
A704	CRL-7911*	human	kidney; adenocarcinoma	epithelial	adherent
A-704	HTB-45	human	kidney; adenocarcinoma	epithelial	adherent
A717	HB-9596†	mouse/mouse	hybridoma	lymphoblast	suspension
A-72	CRL-1542	dog	unknown; tumor	fibroblast	adherent
A7r5	CRL-1444	rat	thoracic aorta; smooth muscle	fibroblast	adherent
A9	CCL-1.4	mouse	subcutaneous connective tissue (areolar and alveolar)	fibroblast	adherent
A9	CRL-1811	mouse/mouse	hybridoma	lymphoblast	suspension
A-9	CRL-6319*	mouse	connective tissue	fibroblast	adherent
A9 L hD2 S.C. 18	CRL-10225†	mouse	subcutaneous connective tissue; expresses human dopamine D2 receptor	fibroblast	adherent
AA224	HB-10183†	mouse/mouse	hybridoma	lymphoblast	suspension
AA5	CRL-2637	mouse/mouse	hybridoma	lymphoblast	suspension
AA8	CRL-1859	hamster, Chinese	ovary	fibroblast	mixed
Ab 21.1	HB-11601†	mouse/mouse	hybridoma	lymphoblast	suspension
Ab 23.1	HB-11602†	mouse/mouse	hybridoma	lymphoblast	suspension
AB.9	CRL-2298	zebrafish	caudal fin	fibroblast	adherent
AB1-2	HB-33	mouse/mouse	hybridoma	lymphoblast	suspension
ABE-8.1/2	TIB-205	mouse	pre-B lymphoblast; lymphoma; AMLV transformed	lymphoblast	suspension
AC133.1	HB-12346†	mouse/mouse	hybridoma	lymphoblast	suspension
ACHN	CRL-1611	human	kidney; renal cell adenocarcinoma	epithelial	adherent
ACT I	HB-80	mouse/mouse	hybridoma	lymphoblast	suspension
ACT IV	HB-81	mouse/mouse	hybridoma	lymphoblast	suspension
Ad Hot	CRL-1227	human	skin; Ehlers-Danlos syndrome, type II	fibroblast	adherent
AE-1	HB-72	mouse/mouse	hybridoma	lymphoblast	suspension
AE-2	HB-73	mouse/mouse	hybridoma	lymphoblast	suspension
AE9D6	HB-125	mouse/mouse	hybridoma	lymphoblast	suspension
Aedes aegypti	CCL-125	mosquito	larva	epithelial	adherent
Aedes albopictus	CCL-126	mosquito	larva	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Aedes albopictus clone C6/36	CRL-1660	mosquito	whole larva		adherent
AF3-12.1.3	HB-160	mouse/mouse	hybridoma	lymphoblast	suspension
AF4-73.3.1	HB-201	mouse/mouse	hybridoma	lymphoblast	suspension
AF6-120.1.2	HB-163	mouse/mouse	hybridoma	lymphoblast	suspension
AF6-122.2.5	HB-199	mouse/mouse	hybridoma	lymphoblast	suspension
AF6-78.25.4	HB-162	mouse/mouse	hybridoma	lymphoblast	suspension
AF6-88.5.3	HB-158	mouse/mouse	hybridoma	lymphoblast	suspension
AFT024	SCRC-1007	mouse	embryonic liver; feeder layer	fibroblast	adherent
AGS	CRL-1739	human	stomach; gastric adenocarcinoma	epithelial	adherent
A-HER2	CRL-10463†	mouse/mouse	hybridoma	lymphoblast	suspension
AHH-1	CRL-8146†	human	peripheral blood, B lymphocyte; EBNA positive	lymphoblast	clusters in suspension
AHL-1	CCL-195	hamster, Armenian	lung	fibroblast	adherent
Ainv15	SCRC-1029	mouse	embryonic stem cell	spherical colony	adherent
AK-D	CCL-150	cat	lung	epithelial	adherent
AKR/JA.Sp	CRL-6320*	mouse	spleen	fibroblast	adherent
AKR1.G.1.OVA^{R}.1.26	TIB-232	mouse	hybridoma fusion partner, T cell	lymphoblast	suspension
AL 1-27	HB-8441†	mouse/mouse	hybridoma	lymphoblast	suspension
Al Ke	CRL-1325	human	skin; Ehlers-Danlos syndrome, presumed heterozygote	fibroblast	adherent
AL/N	CRL-6506*	mouse	unknown		
α-ACE 3.1.1	HB-8191†	mouse/mouse	hybridoma	lymphoblast	suspension
αBL5C2.870005	HB-9907†	bovine/mouse	hybridoma	lymphoblast	suspension
αBL5C2.870009	HB-9908†	bovine/mouse	hybridoma	lymphoblast	suspension
αBL5C2.870016	HB-9909†	bovine/mouse	hybridoma	lymphoblast	suspension
αIR-1	HB-175	mouse/mouse	hybridoma	lymphoblast	suspension
αM346C7C1	HB-11124†	mouse/mouse	hybridoma	lymphoblast	suspension
αTC1 Clone 9	CRL-2350	mouse (transgenic)	pancreas, alpha cell; adenoma	epithelial	adherent
Am Coo	CRL-1286	human	skin; osteogenesis imperfecta (tarda)	fibroblast	adherent
AML14.3D10 /CCCKR3 Clone 16	CRL-12079†	human	peripheral blood; acute myeloid leukemia		suspension
Am Ric	CRL-1129	human	skin; osteogenesis imperfecta	fibroblast	adherent
Amdur II	CCL-124	human	skin; methylmalonic acidemia	fibroblast	adherent
AMJ2-C11	CRL-2456	mouse	lung; alveolar macrophage	macrophage	mixed
AMJ2-C8	CRL-2455	mouse	lung; alveolar macrophage	macrophage	mixed
AML12	CRL-2254	mouse (transgenic)	liver	epithelial	adherent
AML-193	CRL-9589†	human	peripheral blood; monocyte; acute monocytic leukemia	lymphoblast	suspension
AMS 9.1.1.1	HB-161	mouse/mouse	hybridoma	lymphoblast	suspension
An Zan	CRL-1266	human	skin; Marfan syndrome	fibroblast	adherent
AN3 CA	HTB-111	human	lymph node (metastasis); adenocarcinoma (endometrium primary)	epithelial	adherent
ANJOU 65	CRL-11269†	human	kidney; highly transfective	epithelial	adherent
Antheraea cells, adapted	CCL-80	moth	ovary	varied	suspension
anti-130-kDa Mesothelial-Ciliated Cells	CRL-2401	mouse/mouse	hybridoma	lymphoblast	suspension
Antibody 2.06	HB-104	mouse/mouse	hybridoma	lymphoblast	suspension
Anti-My-10 clone 28/8/8/	HB-8483†	mouse/mouse	hybridoma	lymphoblast	suspension
Anti-SC35	CRL-2031	mouse/mouse	hybridoma	lymphoblast	suspension
anti-SR	CRL-2383	mouse/mouse	hybridoma	lymphoblast	suspension
anti-SRp20	CRL-2384	mouse/mouse	hybridoma	lymphoblast	suspension
AP-3	HB-242	mouse/mouse	hybridoma	lymphoblast	suspension
AP.6	CRL-2227	mouse/mouse	hybridoma	lymphoblast	suspension
Ar Ke-2	CRL-1324	human	skin; Ehlers-Danlos syndrome, presumed heterozygote	fibroblast	adherent
AR42J	CRL-1492	rat	exocrine pancreas; tumor		adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
ARH-77	CRL-1621	human	peripheral blood, B lymphoblast; plasma cell leukemia	lymphoblast	suspension
ARIP	CRL-1674	rat	exocrine pancreas; tumor	epithelial	adherent
ARPE-19	CRL-2302	human	eye (retina), pigmented epithelium	epithelial	adherent
ARPE-19/HPV-16	CRL-2502	human	eye (retina), pigmented epithelium; HPV-16 transfected	epithelial	adherent
AS 33	HB-8779†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
As4.1	CRL-2193	mouse (transgenic)	kidney; intraparenchymal	epithelial	adherent
ASK	CRL-2747	Atlantic salmon	kidney	epithelial	adherent
AsPC-1	CRL-1682	human	ascites (metastasis); adenocarcinoma (pancreas primary)		adherent
ATRFLOX	CRL-2780	human	colon; colorectal carcinoma	epithelial	adherent
AtT-20	CCL-89	mouse	pituitary tumor	small, rounded	clusters in suspension
AtT-20/D16v-F2	CRL-1795	mouse	pituitary tumor	small rounded	adherent
AtT-20ins (CGT-6)	CRL-11285†	mouse	pituitary tumor; glucose-stimulated insulin release		adherent
AT3B-1	CRL-2375	rat	prostate; malignant carcinoma	epithelial	adherent
AU565	CRL-2351	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	epithelial	adherent
AV_3	CCL-21	human	HeLa contaminant	epithelial	adherent
AVE-115	CRL-6507*	rat	unknown		
Aw3.18.14	CRL-2826	mouse/mouse	hybridoma	lymphoblast	suspension
B/C3T3.We	CRL-6327*	mouse	embryo	fibroblast	adherent
B/CMBA.Ov	CRL-6331*	mouse	ovary	epithelial	adherent
B/CWE	CRL-6334*	mouse	embryo		adherent
B104-1-1	CRL-1887	mouse	embryo; expresses her2/*neu*	fibroblast	adherent
B11	HB-8372†	mouse/mouse	hybridoma	lymphoblast	suspension
B13-24	CRL-11397†	hamster, Chinese	ovary; produces 23FG2; anti CD18 Mab	epithelial	adherent
B14FAF28-G3	CCL-14	hamster, Chinese	peritoneum	fibroblast	adherent
B16-F0	CRL-6322*	mouse	skin; melanoma		adherent
B16-F1	CRL-6323*	mouse	skin; melanoma		adherent

ATCC Cell Biology Trivia #3

Who is credited with inventing the microscope?

The first microscope is generally attributed to Zacharias Janssen around 1590. Another Dutch lensmaker, Antoni van Leeuwenhoek, took a small microscope used for examining textiles and tinkered with it until its magnification was vastly improved. Although he was unschooled in the sciences, his drawings of protozoa delighted the Royal Society in London around 1668.

B16-F10	CRL-6475*	mouse	skin; melanoma		adherent
B1B3	CRL-2249	mouse/mouse	hybridoma	lymphoblast	suspension
B1B6	CRL-2248	mouse/mouse	hybridoma	lymphoblast	suspension
B2.Ln	CRL-6022*	bovine	lymph node		
B2.Sp	CRL-6023*	bovine	spleen		
B2.Sp/Thy	CRL-6024*	bovine	mixed spleen and thymus		
B2-1	CRL-8085†	mouse	embryo; thymidine kinase negative (TK–)	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
B21-2	TIB-229	rat/mouse	hybridoma	lymphoblast	suspension
B25.2	HB-8107†	mouse/mouse	hybridoma	lymphoblast	suspension
B27M1	HB-157	mouse/mouse	hybridoma	lymphoblast	suspension
B27M2	HB-165	mouse/mouse	hybridoma	lymphoblast	suspension
B29	HB-9746†	mouse/mouse	hybridoma	lymphoblast	suspension
B-3	CRL-11421†	human	eye (lens); AdV12-SV40 transformed	epithelial	adherent
B3/25	CRL-8034†	mouse/mouse	hybridoma	lymphoblast	suspension
B35	CRL-2754	rat	central nervous system; nitrosoethylurea-induced neuroblastoma	neuronal	adherent
B38.1	HB-8110†	mouse/mouse	hybridoma	lymphoblast	suspension
B3D	CRL-2634	mouse/mouse	hybridoma	lymphoblast	suspension
B5	HB-8453†	mouse/mouse	hybridoma	lymphoblast	suspension
B505	HB-12000†	mouse/mouse	hybridoma	lymphoblast	suspension
B5 NIH	HB-10569†	mouse/mouse	hybridoma	lymphoblast	suspension
B6.2	HB-8106†	mouse/mouse	hybridoma	lymphoblast	suspension
B69	HB-9437	mouse/mouse	hybridoma	lymphoblast	suspension
B6H12.2	HB-9771†	mouse/mouse	hybridoma	lymphoblast	suspension
B72.3	HB-8108†	mouse/mouse	hybridoma	lymphoblast	suspension
B7-24-E1G4	HB-11341†	mouse/mouse	hybridoma	lymphoblast	suspension
B8-24-3	TIB-139	mouse/mouse	hybridoma	lymphoblast	suspension
Ba Pot	CRL-1280	human	skin; osteogenesis imperfecta (congenita)	fibroblast	adherent
BA7.3C.9	HB-10716†	mouse/mouse	hybridoma	lymphoblast	suspension
BA-D5	HB-287	mouse/mouse	hybridoma	lymphoblast	suspension
BA-G5	HB-276	mouse/mouse	hybridoma	lymphoblast	suspension
BALB/3T12-3	CCL-164	mouse	embryo	fibroblast	adherent
BALB/3T3 clone A31	CCL-163	mouse	embryo	fibroblast	adherent
BALB/B 0.75BAE A.1R.1 HD A.8	TIB-84	mouse	embryo; chemically transformed	fibroblast	adherent
BALB/c 10CrMCA A.2R.1	TIB-86	mouse	embryo; chemically transformed	fibroblast	adherent
BALB/c 10ME HD A.5R.1	TIB-85	mouse	embryo; chemically transformed	fibroblast	adherent
BALB/c AMuLV A.3R.1	TIB-87	mouse	embryo; AMLV transformed	fibroblast	adherent
BALB/c AMuLV A.6R.1	TIB-90	mouse	embryo; AMLV transformed	fibroblast	adherent
BALB/c CL.7	TIB-80	mouse	embryo	fibroblast	adherent
BALB SFME Serum Free Mouse Embryo	CRL-9392†	mouse	embryo	fibroblast	adherent
BB	CCL-59	bullhead, brown	mixed connective tissue and muscle	fibroblast	adherent
BB7.1	HB-56	mouse/mouse	hybridoma	lymphoblast	suspension
BB7.2	HB-82	mouse/mouse	hybridoma	lymphoblast	suspension
BB7.5	HB-120	mouse/mouse	hybridoma	lymphoblast	suspension
BB7.6	HB-115	mouse/mouse	hybridoma	lymphoblast	suspension
BB7.7	HB-94	mouse/mouse	hybridoma	lymphoblast	suspension
BB88	TIB-55	mouse	spleen; erythroblast; leukemia	lymphoblast	suspension
BBm	CRL-6016*	bovine	bone marrow	epithelial	adherent
BBM	CRL-9482†	human	lung (bronchus); virus transformed	epithelial	adherent
BBM.1	HB-28	mouse/mouse	hybridoma	lymphoblast	suspension
BC-1	CRL-2230	human	B lymphoblast; lymphoma; EBV and KSHV positive	lymphoblast	suspension
BC16A	TIB-59	mouse	spleen; leukemia	lymphoblast	suspension
BC-2	CRL-2231	human	B lymphoblast; lymphoma; EBV and KSHV positive	lymphoblast	suspension
BC3	HB-10166†	mouse/mouse	hybridoma	lymphoblast	suspension
BC-3	CRL-2277†	human	B lymphoblast; lymphoma; KSHV positive	lymphoblast	suspension
BC3A	TIB-60	mouse	spleen; leukemia	lymphoblast	suspension
BC_3H1	CRL-1443	mouse	brain; methylnitrosourea-induced smooth muscle-like tumor		adherent
BC9-E5	CRL-1670	mouse/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
bcd mab23	CRL-2107	mouse/mouse	hybridoma	lymphoblast	suspension
BCE C/D-1b	CRL-2048	bovine	eye (cornea)	endothelial	adherent
BCL$_1$ clone 5B$_1$b	TIB-197	mouse	B lymphocyte; leukemia; lymphoma	lymphoblast	adherent
BCP-1	CRL-2294	human	peripheral blood, B lymphoblast; body cavity-based lymphoma	lymphoblast	suspension
BD5-2d	HB-9689†	mouse/mouse	hybridoma	lymphoblast	suspension
BDCM	CRL-2740	human	peripheral blood, B lymphoblast; acute myelogenous leukemia	lymphoblast	suspension
Be Ar	CRL-1167	human	skin; xeroderma pigmentosum, presumed heterozygote	fibroblast	adherent
Be Sal	CRL-1140	human	skin; osteoporosis	fibroblast	adherent
Be Tim	CRL-1254	human	skin; xeroderma pigmentosum, presumed heterozygote	fibroblast	adherent
BE2	TIB-182	mouse/mouse	hybridoma	lymphoblast	suspension
BE29G1	HB-233	rat/mouse	hybridoma	lymphoblast	suspension
BE(2)-C	CRL-2268	human	bone marrow (metastasis); neuroblastoma (brain primary)	neuroblast	adherent
BE(2)-M17	CRL-2267	human	bone marrow (metastasis); neuroblastoma (brain primary)	neuroblast	adherent
BE3F9	HB-133	mouse/mouse	hybridoma	lymphoblast	suspension
BEAS-2B	CRL-9609†	human	lung (bronchus); virus transformed	epithelial	adherent
BEND	CRL-2398	bovine	uterus (endometrium)	epithelial	adherent
bEnd.3	CRL-2299	mouse	brain (cerebral cortex); endothelioma; polyoma middle T antigen transformed	endothelial	adherent
Ber Lin	CRL-1132	human	skin; osteoporosis	fibroblast	adherent
Bet-1	HB-100	rat/mouse	hybridoma	lymphoblast	suspension
Bet-2	HB-88	rat/mouse	hybridoma	lymphoblast	suspension
Beta-TC-6	CRL-11506†	mouse (transgenic)	pancreas, beta cell; insulinoma		adherent
BeWo	CCL-98	human	placenta; choriocarcinoma	epithelial	adherent
BF-11	CRL-8164†	rat/mouse	hybridoma	lymphoblast	suspension
BF-2	CCL-91	bluegill	caudal trunk	fibroblast	adherent
BF-45	HB-278	mouse/mouse	hybridoma	lymphoblast	suspension
BF-F3	HB-283	mouse/mouse	hybridoma	lymphoblast	suspension
Bge	CRL-1494	snail	embryo		adherent
BHK-21 (C-13)	CCL-10	hamster, Syrian golden	kidney	fibroblast	adherent
BHK21-pcDNA3.1-HC	CRL-13001†	hamster, Syrian golden	BHK-21 transformed; expresses human erythropoietin	fibroblast	adherent
BHK570	CRL-10314†	hamster	kidney	fibroblast	adherent
Bi Fin	CRL-1219	human	skin; Ehlers-Danlos syndrome	fibroblast	adherent
Bing	CRL-11554†	human	kidney; amphotropic retroviral packaging line	epithelial	adherent
BJ	CRL-2522	human	skin (foreskin)	fibroblast	adherent
BJ-5ta	CRL-4001	human	foreskin; immortalized with hTERT	fibroblast	adherent
BL-3	CRL-8037†	bovine	lymphosarcoma; leukemia	lymphoblast	suspension
BL3.1	CRL-2306	bovine	B lymphocyte; lymphosarcoma	lymphoblast	suspension
BLK CL.4	TIB-81	mouse	embryo	fibroblast	adherent
BLK SV HD.2 A.5R.1 A.3R.1	TIB-88	mouse	embryo; SV40 transformed	fibroblast	adherent
BLn	CRL-6017*	bovine	lymph node		
BLO-11	CCL-198	mouse	skeletal muscle; lysyl oxidase deficiency	fibroblast	adherent
BM-N	CRL-8910†	silkworm	mixed		
BNL 1ME A.7R.1	TIB-75	mouse	liver; chemically transformed		adherent
BNL 1NG A.2	TIB-76	mouse	liver; chemically transformed		adherent
BNL CL.2	TIB-73	mouse	liver; embryonic		adherent
BNL SV A.8	TIB-74	mouse	liver; SV40 transformed		adherent
Bo Gin	CRL-1180	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
BP107.2.2	TIB-154	mouse/mouse	hybridoma	lymphoblast	suspension
BpRcl	CRL-2217	mouse	liver; hepatoma	epithelial	adherent
BRL 3A	CRL-1442	rat	liver		adherent
BS-C-1	CCL-26	monkey, African green	kidney	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
BSC40	CRL-2761	African green monkey	kidney	epithelial	adherent
BSp	CRL-6019*	bovine	spleen	amoeboid	
BT	CRL-1390	bovine	turbinate		adherent
BT-20	HTB-19	human	mammary gland; carcinoma	epithelial	adherent
BT-474	HTB-20	human	mammary gland; ductal carcinoma	epithelial	adherent, patchy
BT-483	HTB-121	human	mammary gland; ductal carcinoma	epithelial	adherent, patchy
BT-549	HTB-122	human	mammary gland; ductal carcinoma	epithelial	adherent
BThy	CRL-6020*	bovine	mixed spleen and thymus		
BTV10XSp2/0-Ag-14-10D4.90	HB-8377†	mouse/mouse	hybridoma	lymphoblast	suspension
BUD-8	CRL-1554	human	skin	fibroblast	adherent
BVD2-21C11.3	HB-9569†	rat/mouse	hybridoma	lymphoblast	suspension
BVD2-23B6.4	HB-9568†	rat/mouse	hybridoma	lymphoblast	suspension
BW5147(T200^{-}a) 5.2	TIB-233	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
BW5147.3	TIB-47	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
BW5147.3(Thy-1^{-}e).10	TIB-234	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
BW5147.G.1.4	TIB-48	mouse	hybridoma fusion partner; T cell	lymphoblast	suspension
BW5147.G.1.4. OUA^{R}.1	CRL-1588	mouse	hybridoma fusion partner; T cell	lymphoblast	suspension
BxPC-3	CRL-1687	human	pancreas; adenocarcinoma		adherent
BZR	CRL-9483†	human	lung (bronchus); virus transformed	epithelial	adherent
c1 (B6NLxv1c2)	CRL-2716	mouse	liver; hepatoma	epithelial	adherent
C1.18.4	TIB-11	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
C11C1	HB-8964†	mouse/mouse	hybridoma	lymphoblast	suspension
c12 (B15ECiii2)	CRL-2710	mouse	liver; hepatoma	epithelial	adherent
C127:LT	CRL-1804	mouse	mammary gland tumor	epithelial	adherent
C127I	CRL-1616	mouse	mammary gland tumor	epithelial	adherent
C129	HB-9516†	mouse/mouse	hybridoma	lymphoblast	suspension
C13589	CRL-2704	human	B lymphoblast; EBV transformed; fragile X	lymphoblast	suspension
C1498	TIB-49	mouse	leukemia; acute myeloid	lymphoblast	suspension
C166	CRL-2581	mouse (transgenic)	yolk sac; endothelial cell differentiation model; stem cell feeder layer	endothelial	adherent
C166-GFP	CRL-2583	mouse (transgenic)	yolk sac; GFP-expressing version of C166	endothelial	adherent
C171	HB-9515†	mouse/mouse	hybridoma	lymphoblast	suspension
C180	HB-9517†	mouse/mouse	hybridoma	lymphoblast	suspension
C1R-B7	CRL-2371	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	mixed
C1R-neo	CRL-2369	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
C1R-sB7	CRL-2370	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	mixed
C 211	CCL-123	human	skin; Cri du Chat syndrome	fibroblast	adherent
C273	HB-9303†	mouse/mouse	hybridoma	lymphoblast	suspension
C2BBe1	CRL-2102	human	colon; colorectal adenocarcinoma	epithelial	adherent
C_2C_{12}	CRL-1772	mouse	muscle	fibroblast	adherent
C305	CRL-2424	mouse/mouse	hybridoma	lymphoblast	suspension
C3-124	HB-60	mouse/mouse	hybridoma	lymphoblast	suspension
C32	CRL-1585	human	skin; amelanotic melanoma		adherent
C32TG	CRL-1579	human	skin; amelanotic melanoma		adherent
C-33 A	HTB-31	human	cervix; carcinoma	epithelial	adherent
c35 (B16GBi1c3)	CRL-2715	mouse	liver; hepatoma	epithelial	adherent
c37 (B7IFi1)	CRL-2711	mouse	liver; hepatoma	epithelial	adherent
C38	CRL-2779	human	bronchus; cystic fibrosis; immortalized with Ad12-SV40 hybrid	epithelial	adherent
C3A	CRL-10741†	human	liver; hepatocellular carcinoma	epithelial	adherent
C_3H/10T1/2, Clone 8	CCL-226	mouse	embryo	fibroblast	adherent
C3H/MCA clone 15	CRL-1411	mouse	embryo	fibroblast	adherent
C3H/MCA clone 16	CRL-1412	mouse	embryo	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
c4 (B13NBii1)	CRL-2717	mouse	liver; hepatoma	epithelial	adherent
C-4 I	CRL-1594	human	cervix; carcinoma	epithelial	adherent
C-4 II	CRL-1595	human	cervix; carcinoma	epithelial	adherent
C44	CRL-1943	mouse/mouse	hybridoma	lymphoblast	suspension
C5	HB-8669†	human/(human x mouse	hybridoma	lymphoblast	suspension
C5/MJ	CRL-8293†	human	cord blood, T lymphocyte; HTLV-1 infected	lymphoblast	suspension
C57L/J.We	CRL-6336*	mouse	embryo		adherent
C58(NT)D.1.G. OVA^R.1	TIB-236	rat	hybridoma fusion partner; T cell	lymphoblast	suspension
C5B7	CRL-8753†	human	spleen; B lymphocyte; EBV transformed	lymphoblast	suspension
C_6	CCL-107	rat	brain; glioma	fibroblast	adherent
C6/LacZ	CRL-2199	rat	brain; gliosarcoma; expresses beta-galactosidase	fibroblast	adherent
C6/lacZ7	CRL-2303	rat	brain; gliosarcoma; expresses beta-galactosidase	fibroblast	adherent
C7	CRL-1691	mouse/mouse	hybridoma	lymphoblast	suspension
C8-B4	CRL-2540	mouse	brain (cerebellum)	neuronal	adherent
C8-D1A	CRL-2541	mouse	brain (cerebellum)	neuronal	adherent
C8-D30	CRL-2534	mouse	brain (cerebellum)	neuronal	adherent
C8-S	CRL-2535	mouse	brain (cerebellum)	neuronal	adherent
Ca Ski	CRL-1550	human	mesentery, small bowel (metastasis); epidermoid carcinoma (cervix primary)	epithelial	adherent
CA3-F4	CRL-1667	mouse/mouse	hybridoma	lymphoblast	suspension
CA46	CRL-1648	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
CAB 117-12D10	HB-10558†	mouse/mouse	hybridoma	lymphoblast	suspension
Caco-2	HTB-37	human	colon; colorectal adenocarcinoma	epithelial	adherent
CA-HPV-10	CRL-2220	human	prostate; adenocarcinoma; HPV-18 transfected	epithelial	adherent
Caki-1	HTB-46	human	skin (metastasis); clear cell carcinoma (kidney primary)	epithelial	adherent
Caki-2	HTB-47	human	kidney; clear cell carcinoma	epithelial	adherent
CAL 27	CRL-2095	human	tongue; squamous cell carcinoma	epithelial	adherent
Calu-1	HTB-54	human	pleura (metastasis); epidermoid carcinoma (lung primary)	epithelial	adherent
Calu-3	HTB-55	human	pleural effusion (metastasis); adenocarcinoma (lung primary)	epithelial	adherent
Calu-6	HTB-56	human	unknown, probably lung anaplastic carcinoma	epithelial	adherent
CAMA-1	HTB-21	human	pleural effusion (metastasis); adeno-carcinoma (mammary gland primary)	epithelial	adherent, patchy
Caov-3	HTB-75	human	ovary; adenocarcinoma	epithelial	adherent
Caov-4	HTB-76	human	fallopian tube (metastasis); adenocarcinoma (ovary primary)	epithelial	adherent
Capan-1	HTB-79	human	liver (metastasis); adenocarcinoma (pancreas primary)	epithelial	adherent
Capan-2	HTB-80	human	pancreas; adenocarcinoma	polygonal	adherent
CAR	CCL-71	goldfish	fin	fibroblast	adherent
Cates-1B	HTB-104	human	testis; embryonal carcinoma	mixed	adherent
CATH.a	CRL-11179†	mouse (transgenic)	brain, neuron	mixed	
CBL-1	HB-8214†	mouse/mouse	hybridoma	lymphoblast	suspension
CC15	HB-265	mouse/mouse	hybridoma	lymphoblast	suspension
CC17	HB-281	mouse/mouse	hybridoma	lymphoblast	suspension
CC20	HB-267	mouse/mouse	hybridoma	lymphoblast	suspension
CC21	HB-288	mouse/mouse	hybridoma	lymphoblast	suspension
CC29	HB-269	mouse/mouse	hybridoma	lymphoblast	suspension
CC30	HB-270	mouse/mouse	hybridoma	lymphoblast	suspension
CC38	HB-266	mouse/mouse	hybridoma	lymphoblast	suspension
CC39	HB-274	mouse/mouse	hybridoma	lymphoblast	suspension
CC42	HB-272	mouse/mouse	hybridoma	lymphoblast	suspension
CC 49	HB-9459†	mouse/mouse	hybridoma	lymphoblast	suspension
CC51	HB-271	mouse/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
CC55	HB-282	mouse/mouse	hybridoma	lymphoblast	suspension
CC56	HB-273	mouse/mouse	hybridoma	lymphoblast	suspension
CC57	HB-268	mouse/mouse	hybridoma	lymphoblast	suspension
CC58	HB-275	mouse/mouse	hybridoma	lymphoblast	suspension
CC63	HB-264	mouse/mouse	hybridoma	lymphoblast	suspension
CC8	HB-280	mouse/mouse	hybridoma	lymphoblast	suspension
CC9C10	HB-123	mouse/mouse	hybridoma	lymphoblast	suspension
CCD 1102 KERTr	CRL-2310	human	skin; keratinocyte; HPV-16 E6/E7 transformed	epithelial	adherent
CCD 1103 KIDTr	CRL-2304	human	kidney; HPV-16 E6/E7 transformed	epithelial	adherent
CCD 1105 KIDTr	CRL-2305	human	kidney; HPV-16 E6/E7 transformed	epithelial	adherent
CCD 1106 KERTr	CRL-2309	human	skin; keratinocyte; HPV-16 E6/E7 transformed	epithelial	adherent
CCD 1108Sk	CRL-2352	human	skin	fibroblast	adherent
CCD 18Lu	CCL-205	human	lung	fibroblast	adherent
CCD 841 CoN	CRL-1790	human	colon, fetal	epithelial	adherent
CCD 841 CoTr	CRL-1807	human	colon, fetal; SV40 transformed	epithelial	adherent
CCD-1037Sk	CRL-2054	human	skin	fibroblast	adherent
CCD-1058Sk	CRL-2071	human	skin	fibroblast	adherent
CCD-1059Sk	CRL-2072	human	skin	fibroblast	adherent
CCD-1064Sk	CRL-2076	human	skin	fibroblast	adherent

ATCC Cell Biology Trivia #4

How were early models of the centrifuge used?

It's uncertain who developed the first centrifuge, but the early models were used to separate milk from cream around 1880. The invention of the ultracentrifuge earned Theodor Svedberg the Nobel Prize in Chemistry in 1926.

CCD-1065Sk	CRL-2077	human	skin	fibroblast	adherent
CCD-1068Sk	CRL-2086	human	skin	fibroblast	adherent
CCD-1069Sk	CRL-2089	human	skin	fibroblast	adherent
CCD-1070Sk	CRL-2091	human	skin	fibroblast	adherent
CCD-1072Sk	CRL-2088	human	skin	fibroblast	adherent
CCD-1074Sk	CRL-2090	human	skin	fibroblast	adherent
CCD-1076Sk	CRL-2096	human	skin	fibroblast	adherent
CCD-1077Sk	CRL-2094	human	skin	fibroblast	adherent
CCD-1079Sk	CRL-2097	human	skin	fibroblast	adherent
CCD-1086Sk	CRL-2103	human	skin	fibroblast	adherent
CCD-1087Sk	CRL-2104	human	skin	fibroblast	adherent
CCD-1090Sk	CRL-2106	human	skin	fibroblast	adherent
CCD-1092Sk	CRL-2114	human	skin	fibroblast	adherent
CCD-1093Sk	CRL-2115	human	skin	fibroblast	adherent
CCD-1094Sk	CRL-2120	human	skin	fibroblast	adherent
CCD-1095Sk	CRL-2122	human	skin	fibroblast	adherent
CCD-1096Sk	CRL-2129	human	skin	fibroblast	adherent
CCD-1097Sk	CRL-2124	human	skin	fibroblast	adherent
CCD-1098Sk	CRL-2127	human	skin	fibroblast	adherent
CCD-1099Sk	CRL-2201	human	skin	fibroblast	adherent
CCD-1100Sk	CRL-2211	human	skin	fibroblast	adherent
CCD-1101Sk	CRL-2281	human	skin	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
CCD-1109Sk	CRL-2361	human	skin	fibroblast	adherent
CCD-1112Sk	CRL-2429	human	skin (foreskin)	fibroblast	adherent
CCD-1113Sk	CRL-2439	human	skin	fibroblast	adherent
CCD-1114Sk	CRL-2450	human	skin (foreskin)	fibroblast	adherent
CCD-1117Sk	CRL-2465	human	skin	fibroblast	adherent
CCD-1118Sk	CRL-2466	human	skin	fibroblast	adherent
CCD-112 CoN	CRL-1541	human	colon	fibroblast	adherent
CCD-1120Sk	CRL-2510	human	skin	fibroblast	adherent
CCD-1121Sk	CRL-2511	human	skin	fibroblast	adherent
CCD-1122Sk	CRL-2513	human	skin	fibroblast	adherent
CCD-1123Sk	CRL-2524	human	skin	fibroblast	adherent
CCD-1124Sk	CRL-2529	human	skin	fibroblast	adherent
CCD-1126Sk	CRL-2564	human	skin	fibroblast	adherent
CCD-1127Sk	CRL-2565	human	skin	fibroblast	adherent
CCD-1128Sk	CRL-2566	human	skin	fibroblast	adherent
CCD-1129SK	CRL-2575	human	skin	fibroblast	adherent
CCD-1131Sk	CRL-2617	human	skin	fibroblast	adherent
CCD-1132Sk	CRL-2622	human	skin	fibroblast	adherent
CCD-1134Sk	CRL-2673	human	skin	fibroblast	adherent
CCD-1135Sk	CRL-2691	human	skin	fibroblast	adherent
CCD-1136Sk	CRL-2697	human	skin	fibroblast	adherent
CCD-1137Sk	CRL-2703	human	skin (foreskin)	fibroblast	adherent
CCD-1138Sk	CRL-2707	human	skin	fibroblast	adherent
CCD-1139Sk	CRL-2708	human	skin	fibroblast	adherent
CCD-1140Sk	CRL-2714	human	skin	fibroblast	adherent
CCD-1141Sk	CRL-2796	human	skin	fibroblast	adherent
CCD-11Lu	CCL-202	human	lung	fibroblast	adherent
CCD-13Lu	CCL-200	human	lung	fibroblast	adherent
CCD-16Lu	CCL-204	human	lung	fibroblast	adherent
CCD-186Sk	CRL-1563	human	skin; cystic fibrosis	fibroblast	adherent
CCD-18Co	CRL-1459	human	colon	fibroblast	adherent
CCD-19Lu	CCL-210	human	lung	fibroblast	adherent
CCD-25Lu	CCL-215	human	lung	fibroblast	adherent
CCD-25Sk	CRL-1474	human	skin	fibroblast	adherent
CCD-27Sk	CRL-1475	human	skin	fibroblast	adherent
CCD-29Lu	CRL-1478	human	lung; emphysema	fibroblast	adherent
CCD-32Lu	CRL-1485	human	lung	fibroblast	adherent
CCD-32Sk	CRL-1489	human	skin	fibroblast	adherent
CCD-33Co	CRL-1539	human	colon	fibroblast	adherent
CCD-33Lu	CRL-1490	human	lung	fibroblast	adherent
CCD-34Lu	CRL-1491	human	lung	fibroblast	adherent
CCD-34Sk	CRL-1497	human	skin	fibroblast	adherent
CCD-39Lu	CRL-1498	human	lung; hyaline membrane disease	fibroblast	adherent
CCD-39Sk	CRL-1501	human	skin	fibroblast	adherent
CCD-42Sk	CRL-1513	human	skin	fibroblast	adherent
CCD-43Sk	CRL-1509	human	skin	fibroblast	adherent
CCD-8Lu	CCL-201	human	lung	fibroblast	adherent
CCD-944Sk	CRL-1836	human	skin	fibroblast	adherent
CCD-986Sk	CRL-1947	human	skin	fibroblast	adherent
CCF-STTG1	CRL-1718	human	brain; astrocytoma	astrocytic	adherent
CCK061	HB-8786†	mouse/mouse	hybridoma	lymphoblast	suspension
CCO	CRL-2772	channel catfish	ovary	fibroblast	adherent
CCRF S-180 II	CCL-8	mouse	sarcoma	fibroblast	adherent
CCRF-CEM	CCL-119	human	peripheral blood, T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
CCRF-HSB-2	CCL-120.1	human	peripheral blood, T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
CCRF-SB	CCL-120	human	peripheral blood, B lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
CDC 1C42H11	HB-216	mouse/mouse	hybridoma	lymphoblast	suspension
CDR1	HB-213	rat/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
CDR2	HB-214	mouse/mouse	hybridoma	lymphoblast	suspension
CE-1	SCRC-1038	mouse	cassette exchange for double lox targeting; hygromycin resistant	spherical colony	adherent
CE-3	SCRC-1039	mouse	cassette exchange for double lox targeting; puromycin resistant	spherical colony	adherent
Ce Ar	CRL-1165	human	skin; xeroderma pigmentosum, presumed heterozygote	fibroblast	adherent
Ce Geg	CRL-1173	human	skin; Marfan syndrome	fibroblast	adherent
Ce Wal	CRL-1351	human	skin; poikiloderma	fibroblast	adherent
CE9H9	HB-127	mouse/mouse	hybridoma	lymphoblast	suspension
CEM/C1	CRL-2265	human	peripheral blood, T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
CEM/C2	CRL-2264	human	peripheral blood, T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
CEM-CM3	TIB-195	human	hybridoma fusion partner; T cell	lymphoblast	suspension
CESS	TIB-190	human	lymphoblast; myelomonocytic leukemia	lymphoblast	suspension
CF11.T	CRL-6217*	dog	bone; connective tissue; osteosarcoma		
CF17.T	CRL-6219*	dog	connective tissue; cancer		
CF-1 MEF	SCRC-1040	mouse	embryonic fibroblasts; feeder layer	fibroblast	adherent
CF21.T	CRL-6220*	dog	connective tissue; cancer		adherent
CF24.T	CRL-6221*	dog	connective tissue; cancer		
CF28	CRL-6223*	dog	unknown		
Cf2Th	CRL-1430	dog	thymus		adherent
CF3.Th	CRL-6575*	dog	thymus		
CF30.Mg	CRL-6225*	dog	mammary gland		
CF33.MT	CRL-6227*	dog	mammary gland; cancer	epithelial	adherent
CF34.Mg	CRL-6228*	dog	mammary gland; cancer		
CF35.Mg	CRL-6229*	dog	mammary gland; cancer		
CF37.Mg	CRL-6230*	dog	mammary gland		
CF38.Mg	CRL-6231*	dog	mammary gland		
CF41.Mg	CRL-6232*	dog	mammary gland; cancer		adherent
CF43.Mg	CRL-6234*	dog	mammary gland		
CF44.Mg	CRL-6235*	dog	mammary gland		
CF45B.Mg	CRL-6237*	dog	mammary gland; cancer		
CF46.Tr	CRL-6238*	dog	trachea		adherent
CF47.Mg	CRL-6239*	dog	mammary gland		
CF48.Mg	CRL-6240*	dog	mammary gland		
CF49.Mg	CRL-6241*	dog	mammary gland		
CF4-C4	CRL-1716	mouse/mouse	hybridoma	lymphoblast	suspension
CF52.Tr	CRL-6244*	dog	trachea	fibroblast	adherent
CF8.Thy	CRL-6211*	dog	thymus		
CFPAC-1	CRL-1918	human	pancreas; ductal adenocarcinoma; cystic fibrosis	epithelial	adherent
CFZT(A)	CRL-6338*	mouse	unknown; cancer		
CFZT(B)	CRL-6339*	mouse	unknown; cancer		
CG7C7	HB-126	mouse/mouse	hybridoma	lymphoblast	suspension
CGBQ	CCL-169	goose	sternum	fibroblast	adherent
Ch 1 Es (NBL-8)	CCL-73	goat	esophagus	fibroblast	adherent
CH1	TIB-221	mouse	B lymphocyte; lymphoma	lymphoblast	suspension
Ch1.Es	CRL-6581*	goat	esophagus	fibroblast	adherent
Ch13	HB-8573†	human/mouse	hybridoma	lymphoblast	suspension
Ch2.D	CRL-6270*	goat	unknown, possibly skin		
CH26-1352	HB-8329†	mouse/mouse	hybridoma	lymphoblast	suspension
ChaGo-K-1	HTB-168	human	subcutaneous (metastasis); bronchogenic carcinoma (bronchus primary)	epithelial	adherent
Chang Liver	CCL-13	human	HeLa contaminant	epithelial	adherent
CH-EB6	HB-200	mouse/mouse	hybridoma	lymphoblast	suspension
CHH-1	CRL-1680	salmon, chum	heart	fibroblast	adherent
CHL/IU	CRL-1935	hamster, Chinese	lung	fibroblast	adherent
CHL-1	CRL-9446†	human	skin; melanoma	epithelial	adherent
CHO 1-15$_{500}$	CRL-9606†	hamster, Chinese	ovary; produces human t-PA	epithelial	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
CHO/dhFr⁻	CRL-9096†	hamster, Chinese	ovary; deficient in dihydrofolate reductase	epithelial	adherent
CHO-1C6	CRL-1793	hamster, Chinese	ovary; produces neuroleukin	epithelial	adherent
CHO-CD36	CRL-2092	hamster, Chinese	ovary; produces human CD36	epithelial	adherent
CHO DP-12, clone# 1933 aIL8.92 NB 28605/12	CRL-12444†	Chinese hamster	ovary; expresses IgG1 (kappa) against IL-8	fibroblast	adherent
CHO DP-12, clone# 1934 aIL8.92 NB 28605/14	CRL-12445†	Chinese hamster	ovary; expresses IgG1 (kappa) against IL-8	fibroblast	adherent
CHO-ICAM-1	CRL-2093	hamster, Chinese	ovary; produces human ICAM-1	epithelial	adherent
CHO-K1	CCL-61	hamster, Chinese	ovary	epithelial	adherent
CHO-K1	CRL-9618†	hamster, Chinese	ovary	epithelial	adherent
CHP-212	CRL-2273	human	brain, neuroblastoma	neuroblast	adherent
CHP 3 (M.W.)	CCL-132	human	skin; galactosemia; galactose-1-phosphate uridyl transferase deficient	fibroblast	adherent
CHP 4	CCL-133	human	skin; galactosemia; galactose-1-phosphate uridyl transferase deficient	fibroblast	adherent
CHSE-214	CRL-1681	salmon, Chinook	embryo		adherent
CIA-E-4.15	HB-235	mouse/mouse	hybridoma	lymphoblast	suspension
CIA-E-7.12	HB-236	mouse/mouse	hybridoma	lymphoblast	suspension
citrullinemia	CCL-76	human	skin; citrullinemia	fibroblast	adherent
CKMM 14.15	HB-9419†	rat/mouse	hybridoma	lymphoblast	suspension
CKMM 14.5	HB-9420†	rat/mouse	hybridoma	lymphoblast	suspension
CKMM 14.52	HB-9421†	rat/mouse	hybridoma	lymphoblast	suspension
CL18/6	CRL-2518	mouse/mouse	hybridoma	lymphoblast	suspension
CL2	CRL-2514	mouse/mouse	hybridoma	lymphoblast	suspension
CL3	CRL-2515	mouse/mouse	hybridoma	lymphoblast	suspension
CL37	CRL-2516	mouse/mouse	hybridoma	lymphoblast	suspension
Cl. Ly1⁺2⁻/9	CRL-8179†	mouse	spleen; helper/inducer T lymphocyte (Th-2)	lymphoblast	suspension
CLN	CRL-6245*	dog	lymph node		
CLN H11.4	HB-8307†	human/human	hybridoma	lymphoblast	suspension
CLNH5.5	HB-8206†	human/human	hybridoma	lymphoblast	suspension
Clone 1-5c-4	CCL-20.2	human	HeLa contaminant	epithelial	adherent
Clone 15 HL-60	CRL-1964	human	peripheral blood; promyeloblast; acute promyelocytic leukemia	lymphoblast	suspension
Clone 9	CRL-1439	rat	liver	epithelial	adherent
Clone C	CRL-2531	rabbit	kidney (cortex)	epithelial	adherent
Clone M-3	CCL-53.1	mouse	skin, melanocyte; melanoma	epithelial	adherent
CL-S1	CRL-1615	mouse	mammary gland tumor; premalignant	epithelial	adherent
CLT 152	HB-8244†	mouse/mouse	hybridoma	lymphoblast	suspension
CLT 85	HB-8240†	mouse/mouse	hybridoma	lymphoblast	suspension
CMH1a	CRL-8399†	mouse	mammary gland; carcinoma	fibroblast	adherent
CMMT	CRL-6299*	monkey, Rhesus	mammary gland; cancer	epithelial	adherent
CMT-93	CCL-223	mouse	rectum; polyploid carcinoma	epithelial	adherent
CO 88BV59-1	CRL-10624†	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
Co88BV59H21-2	CRL-11538†	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
Co88BV59H21-2V67-66	CRL-11539†	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
COLO 201	CCL-224	human	ascites (metastasis); colorectal adenocarcinoma (colon primary)	bipolar, slightly refractile, fibroblast-like	mixed
COLO 205	CCL-222	human	ascites (metastasis); colorectal adenocarcinoma (colon primary)	epithelial	mixed
COLO 320DM	CCL-220	human	colon; colorectal adenocarcinoma	rounded, refractile	mixed
COLO 320HSR	CCL-220.1	human	colon; colorectal adenocarcinoma	rounded, refractile	mixed
COLO 829	CRL-1974	human	skin; malignant melanoma	fibroblast	adherent
COLO 829BL	CRL-1980	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
CON.1	CRL-2229	mouse/mouse	hybridoma	lymphoblast	suspension
ConA-B1-VICK	CRL-12357†	chicken	spleen; T lymphocyte; transformed with REV-T; produces G-CSF	lymphoblast	clusters in suspension
ConA-C1-VICK	CRL-12135†	chicken	spleen; T lymphocyte; transformed with REV-T; produces G-CSF	lymphoblast	clusters in suspension
COS-1	CRL-1650	monkey, African green	kidney	fibroblast	adherent
COS-7	CRL-1651	monkey, African green	kidney	fibroblast	adherent
CPA 47	CRL-1733	bovine	pulmonary artery; vascular endothelium	cobblestone	adherent
CPAE	CCL-209	bovine	pulmonary artery, vascular endothelium	endothelial	adherent
CRE BAG 2	CRL-1858	mouse	embryo; produces a retrovirus containing the beta-galactosidase gene	fibroblast	adherent
CRFK	CCL-94	cat	kidney (cortex)	epithelial	adherent
Cri du Chat	CCL-90	human	skin; Cri du Chat syndrome	fibroblast	adherent
CSMαβ1H	CRL-8401†	mouse	mammary gland; carcinoma	fibroblast	adherent
CSMαβ6C	CRL-8400†	mouse	mammary gland; carcinoma	fibroblast	adherent
CT26.CL25	CRL-2639	mouse	colon; carcinoma; model for testing immunotherapy protocols in vivo	fibroblast	adherent
CT26.WT	CRL-2638	mouse	colon; carcinoma; model for testing immunotherapy protocols in vivo	fibroblast	adherent
CT6-1D7	CRL-2438	mouse/mouse	hybridoma	lymphoblast	suspension
CTLA4 Ig-24	CRL-10762†	hamster, Chinese	ovary; expresses CTLA4Ig fusion protein	epithelial	adherent
CTLL-2	TIB-214	mouse	T lymphocyte; cytotoxic	lymphoblast	suspension
CTPS	CRL-6496*	rabbit, cottontail	skin; papilloma		
CTX TNA2	CRL-2006	rat	brain (cortex); SV40 transfected	fibroblast	adherent
CV-1	CCL-70	monkey, African green	kidney	fibroblast	adherent
CV-1/EBNA-1	CRL-10478†	monkey, African green	kidney; EBNA-1 expression	fibroblast	adherent
CVC.1	TIB-135	mouse/mouse	hybridoma	lymphoblast	suspension
CVC.4	TIB-137	mouse/mouse	hybridoma	lymphoblast	suspension
CVC.7	TIB-138	mouse/mouse	hybridoma	lymphoblast	suspension
CW13.20-3B3 (clone of BCL 1)	CRL-1669	mouse	B lymphocyte; leukemia	lymphoblast	adherent
Cy34.1.2	TIB-163	mouse/mouse	hybridoma	lymphoblast	suspension
Cyt c–/–	CRL-2613	mouse	embryo; null for cytochrome c; apoptosis studies		adherent
D 14	HB-8439†	mouse/mouse	hybridoma	lymphoblast	suspension
D1.1	CRL-10915†	human	T lymphoblast; acute T cell leukemia; CD4 negative	lymphoblast	suspension
D10.G4.1	TIB-224	mouse	helper/inducer T lymphocyte	lymphoblast	suspension with feeder cells
D1-4G2-4-15	HB-112	mouse/mouse	hybridoma	lymphoblast	suspension
D17	CRL-6248*	dog	bone; osteosarcoma	epithelial	adherent
D17	CRL-8468†	dog	bone; osteosarcoma	epithelial	adherent
D-17	CCL-183	dog	lung (metastasis); osteosarcoma (bone primary)	epithelial	adherent
D1B	TIB-56	mouse	spleen, erythroblast; leukemia	lymphoblast	suspension
D1 ORL UVA	CRL-12424†	mouse	bone marrow; multipotent stromal precursor		adherent
D22	CRL-6250*	dog	bone; osteosarcoma		
D24	CRL-2701	rat/rat	hybridoma	lymphoblast	suspension
D283 Med	HTB-185	human	ascites and peritoneum (metastasis); medulloblastoma (cerebellum primary)	epithelial	mixed
D2N	TIB-58	mouse	spleen; leukemia	lymphoblast	suspension
D3-2H2-9-21	HB-114	mouse/mouse	hybridoma	lymphoblast	suspension
D341 Med	HTB-187	human	brain (cerebellum); medulloblastoma	spheroid	suspension
D8/17	HB-8783†	mouse/mouse	hybridoma	lymphoblast	suspension
Da Bon	CRL-1251	human	skin; osteogenesis imperfecta (tarda)	fibroblast	adherent
Da Cav	CRL-1388	human	skin; stiff skin syndrome	fibroblast	adherent
Da Hol	CRL-1379	human	skin; Ehlers-Danlos syndrome, variant type	fibroblast	adherent
Da Mo	CRL-1383	human	skin; Ehlers-Danlos syndrome, type V	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
DA4-4	HB-57	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
DAKIKI	TIB-206	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
DAL K20	CRL-2288	mouse/mouse	hybridoma	lymphoblast	suspension
DAL K29	CRL-2291	mouse/mouse	hybridoma	lymphoblast	suspension
DAL K45	CRL-2292	mouse/mouse	hybridoma	lymphoblast	suspension
DAN	CRL-2130	dog	osteosarcoma; amphotropic retroviral packaging line	fibroblast	adherent
Daoy	HTB-186	human	brain (cerebellum); desmoplastic cerebellar medulloblastoma	polygonal	adherent
DATK32	HB-294	rat/mouse	hybridoma	lymphoblast	suspension
Daudi	CCL-213	human	peripheral blood, B lymphoblast; Burkitt's lymphoma	lymphoblast	suspension
DB	CRL-2289	human	B lymphoblast; large cell lymphoma	lymphoblast	suspension
DB9G8	HB-124	mouse/mouse	hybridoma	lymphoblast	suspension
DBA A.Sp	CRL-6340*	mouse	spleen		adherent
DBA C.Sp	CRL-6342*	mouse	spleen		
DBS-FCL-1	CCL-161	monkey, African green	lung	fibroblast	adherent
DBS-FCL-2	CCL-162	monkey, African green	lung	fibroblast	adherent
DBS-FRhL-2	CL-160	monkey, Rhesus	lung	fibroblast	adherent
DBTRG-05MG	CRL-2020	human	brain, glial cell; glioblastoma	fibroblast	adherent
DC101	HB-11534†	rat/mouse	hybridoma	lymphoblast	suspension
DD-4	HB-9743†	mouse/mouse	hybridoma	lymphoblast	suspension
DDT_1 MF-2	CRL-1701	hamster, Syrian golden	ductus deferens, smooth muscle; leiomyosarcoma		adherent
DDT_1-MF-2	CRL-12051†	hamster, Syrian golden	ductus deferens, smooth muscle; leiomyosarcoma		adherent
De Te	CRL-1249	human	skin; Marfan syndrome	fibroblast	adherent
DEC-205	HB-290	rat/mouse	hybridoma	lymphoblast	suspension
Dede	CCL-39	hamster, Chinese	lung	fibroblast	adherent
δTA4-1	HB-70	mouse/mouse	hybridoma	lymphoblast	suspension
Dempsey	CCL-28	human	skin; Klinefelter syndrome	fibroblast	adherent
Detroit 510	CCL-72	human	skin; galactosemia	fibroblast	adherent
Detroit 525	CCL-65	human	skin; Turner syndrome	fibroblast	adherent
Detroit 529	CCL-66	human	skin; Down syndrome	fibroblast	adherent
Detroit 532	CCL-54	human	skin (foreskin); Down syndrome	fibroblast	adherent
Detroit 539	CCL-84	human	skin; Down syndrome	fibroblast	adherent
Detroit 548	CCL-116	human	skin	fibroblast	adherent
Detroit 551	CCL-110	human	skin, fetal	fibroblast	adherent
Detroit 562	CCL-138	human	pleural effusion (metastasis); carcinoma (pharynx primary)	epithelial	adherent
Detroit 573	CCL-117	human	skin	fibroblast	adherent
DH82	CRL-10389†	dog	histiocytosis; malignant	macrophage	adherent
DH82ECOK	CRL-10390†	dog	histiocytosis; malignant	macrophage	adherent
DHFR-G8	CRL-1915	mouse	embryo; expresses her2/*neu*	fibroblast	adherent
DI TNC_1	CRL-2005	rat	brain (diencephalon); SV40 transfected	fibroblast	adherent
DII 33.1	CRL-1827	mouse/mouse	hybridoma	lymphoblast	suspension
DLD-1	CCL-221	human	colon; colorectal adenocarcinoma	epithelial	adherent
DMS 114	CRL-2066	human	lung; carcinoma; small cell lung cancer		adherent
DMS 153	CRL-2064	human	liver (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent clusters
DMS 53	CRL-2062	human	lung; carcinoma; small cell lung cancer		adherent
DMS 79	CRL-2049	human	lung; carcinoma; small cell lung cancer		clusters in suspension
DNI.Tr	CRL-6009*	armadillo, nine-banded	trachea	fibroblast	adherent
DoCl1 (S^+L^-)	CCL-34.1	dog	kidney	epithelial	adherent
Don	CCL-16	hamster, Chinese	lung	fibroblast	adherent
DoTc2 4510	CRL-7920*	human	cervix; carcinoma	epithelial	adherent
DPSO 114/74	CCL-194	monkey, Bolivian squirrel	lung, fetal	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
DR4 MEF	SCRC-1045	mouse	embryonic fibroblast; feeder layer	fibroblast	adherent
DREG200	HB-302	mouse/mouse	hybridoma	lymphoblast	suspension
DREG56	HB-300	mouse/mouse	hybridoma	lymphoblast	suspension
DRS	CRL-6497*	rabbit	skin	fibroblast	adherent
DS-1	CRL-11102†	human	pleural effusion (metastasis); lymphangiectasia (B lymphocyte primary); IL-6 dependent	lymphoblast	suspension with feeder cells
DS-1	HB-8906†	mouse/mouse	hybridoma	lymphoblast	suspension
DS-3	HB-8651†	mouse/mouse	hybridoma	lymphoblast	suspension
DS-5	HB-8653†	mouse/mouse	hybridoma	lymphoblast	suspension
DS-6	HB-8652†	mouse/mouse	hybridoma	lymphoblast	suspension
DSDh	CRL-2131	dog	osteosarcoma; retroviral packaging line	fibroblast	adherent
DSL-6A/C1	CRL-2132	rat	pancreas; carcinoma	epithelial	adherent
DSL-6B/C2	CRL-2133	rat	pancreas; carcinoma	epithelial	adherent
DSN	CRL-9939†	dog	osteosarcoma; produces SNV helper virus	epithelial	adherent
DT40	CRL-2111	chicken	bursa; lymphoma	lymphoblast	suspension
DT95	CRL-2112	chicken	bursa; lymphoma	lymphoblast	suspension
DU 145	HTB-81	human	brain (metastasis); carcinoma (prostate primary)	epithelial	adherent
DU1-29	HB-263	mouse/mouse	hybridoma	lymphoblast	suspension
DU4475	HTB-123	human	mammary gland; ductal carcinoma	epithelial	suspension
Dubca	CRL-2276	camel	skin	fibroblast	adherent
Duck embryo	CCL-141	duck, Pekin	embryo	fibroblast	adherent
DUKX B1	CRL-9010†	hamster, Chinese	ovary; production of mouse c-*myc* protein	epithelial	adherent
DV68F	CRL-6345*	human/mouse	hybrid		
E 20	HB-8443†	mouse/mouse	hybridoma	lymphoblast	suspension
E. Derm (NBL-6)	CCL-57	horse	skin (dermis)	fibroblast	adherent
E.G7-OVA	CRL-2113	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
E.H. IV	CCL-104	human	peripheral blood; infectious mononucleosis	lymphoblast	suspension
E13 161-7	HB-215	rat/mouse	hybridoma	lymphoblast	suspension
E5BB3IIA2	HB-121	mouse/mouse	hybridoma	lymphoblast	suspension
E6(2)2	HB-8172†	mouse/mouse	hybridoma	lymphoblast	suspension
E-8	HB-10179†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
EB	CRL-1365	human	skin; Ehlers-Danlos syndrome, variant type	fibroblast	adherent
EB1	HTB-60	human	upper maxilla; Burkitt's lymphoma	lymphoblast	suspension
EB2	HTB-61	human	ovary (metastasis); Burkitt's lymphoma (B lymphocyte primary)	lymphoblast	suspension
EB-3	CCL-85	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
EBTr (NBL-4)	CCL-44	bovine	trachea	fibroblast	adherent
Ect1/E6E7	CRL-2614	human	ectocervix; HPV-16 E6/E7 transformed	epithelial	adherent
ED1-19-1-6-5	HB-90	rat/mouse	hybridoma	lymphoblast	suspension with feeder cells
EGC/PK060399egfr	CRL-2690	rat	jejunum (myenteric plexus); enteroglial	glial	adherent
EH17a	CRL-2209	mouse/mouse	hybridoma	lymphoblast	suspension
EH7a	CRL-2194	mouse/mouse	hybridoma	lymphoblast	suspension
Ehrlich-Lettre ascites, strain E	CCL-77	mouse	carcinoma	epithelial	adherent
EHS	CRL-2108	mouse	connective tissue; sarcoma	fibroblast	adherent
EIAV 12E8.1	HB-8917†	mouse/mouse	hybridoma	lymphoblast	suspension
EJ-6-2-Bam-6a	CRL-1888	mouse	embryo	fibroblast	adherent
EJG	CRL-8659†	bovine	adrenal gland; capillary endothelium	endothelial	adherent
EL 1	CRL-9854†	human	spleen; macrophage; monocyte	monocyte/ macrophage	suspension
El Don	CRL-1149	human	skin; Ehlers-Danlos syndrome, type VII (arthrochalasia type)	fibroblast	adherent
EL4	TIB-39	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
EL4.BU	TIB-40	mouse	hybridoma fusion partner, T cell	lymphoblast	suspension
EL4.BU.1.OUA^r.1.1	TIB-41	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
EL4.IL-2	TIB-181	mouse	thymus; lymphoma	lymphoblast	suspension
EL-NC-1S	HB-9647†	mouse/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Em Ar	CRL-1168	human	skin; Ehlers-Danlos syndrome, possible heterozygote	fibroblast	adherent
EMT6	CRL-2755	mouse	breast; mammary carcinoma	epithelial	adherent
EM9	CRL-1861	hamster, Chinese	ovary; defective in single strand break repair	fibroblast	mixed
EML Cell Line, Clone 1	CRL-11691†	mouse	bone marrow; lymphohematopoietic progenitor cell line	stem cell	mixed
EN9F10	CRL-2403	mouse/mouse	hybridoma	lymphoblast	suspension
End1/E6E7	CRL-2615	human	endocervix; HPV-16 E6/E7 transformed	epithelial	adherent
EOC 13.31	CRL-2468	mouse	brain, microglia/macrophage	macrophage	adherent
EOC 2	CRL-2467	mouse	brain, microglia/macrophage	macrophage	adherent
EOC 20	CRL-2469	mouse	brain, microglia/macrophage	macrophage	adherent
EOMA	CRL-2586	mouse	hemangioendothelioma; microvascular endothelial cell model	endothelial	adherent

ATCC Cell Biology Trivia #5

When did concerns over the contamination of cell cultures first arise?

In the late 1950s scientists found that many laboratory cell cultures were mixed or contaminated. A committee was formed to oversee the collecting and characterizing of animal cell lines. ATCC was named as a storage and distribution center, which was the start of the ATCC Cell Biology Collection.

EOMA-GFP	CRL-2587	mouse	hemangioendothelioma; microvascular endothelial cell model; expresses GFP	endothelial	adherent
Ep-16	HB-155	mouse/mouse	hybridoma	lymphoblast	suspension
ER4.7G.11	HB-11642†	mouse/mouse	hybridoma	lymphoblast	suspension
ES-2	CRL-1978	human	ovary; clear cell carcinoma	fibroblast	adherent
ES-C57BL/6	SCRC-1002	mouse	embryonic stem cell	spherical	adherent on feeder cells
ES-D3	CRL-11632†	mouse	embryonic stem cell; pluripotent	epithelial	adherent on feeder cells
ES-D3	CRL-1934	mouse	embryonic stem cell; pluripotent	epithelial	adherent on feeder cells
ES-D3 GL	SCRC-1003	mouse	embryonic stem cell; germline competent	spherical	adherent on feeder cells
ES-E14TG2a	CRL-1821	mouse	embryonic stem cell; pluripotent; HGRPT deficient	spherical	adherent on feeder cells
ESK-4	CL-184	pig	kidney		adherent
F1.652	CRL-2039	mouse/mouse	hybridoma	lymphoblast	suspension
F1-3G8-1	HB-192	mouse/mouse	hybridoma	lymphoblast	suspension
F18 AF1	HB-8208†	mouse/mouse	hybridoma	lymphoblast	suspension
F19	CRL-2733†	mouse/mouse	hybridoma	lymphoblast	suspension
F1A3-23	HB-8207†	mouse/mouse	hybridoma	lymphoblast	suspension
F_1B	CRL-6168*	cat	submandibular lymph node; lymphoma	fibroblast	adherent
F21-1D3G7C8	HB-9463†	mouse/mouse	hybridoma	lymphoblast	suspension
F24	HB-9257†	mouse/mouse	hybridoma	lymphoblast	suspension
F25	CRL-6566*	cat	bone marrow; erythroleukemia	fibroblast	adherent
F32 VIII C4	CRL-1653	mouse/mouse	hybridoma	lymphoblast	suspension
F3B6	HB-8785†	human/mouse	hybridoma fusion partner	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
F4/80	HB-198	rat/mouse	hybridoma	lymphoblast	suspension
F45J	HB-9740†	mouse/mouse	hybridoma	lymphoblast	suspension
F5-A-1/22.8.13	HB-8051†	mouse/mouse	hybridoma	lymphoblast	suspension
F8	CRL-6074*	cat	unknown		adherent
F9	CRL-1720	mouse	testis; embryonic carcinoma; testicular teratoma	epithelial	adherent
F98	CRL-2397	rat	brain; undifferentiated malignant glioma	glial	adherent
FaDu	HTB-43	human	pharynx; squamous cell carcinoma	epithelial	adherent
FAK–/–	CRL-2644	mouse	embryo; null for both FAK and p53, integrin signaling pathway	fibroblast	adherent
FAK+/+	CRL-2645	mouse	embryo; positive for FAK but null for p53, integrin signaling pathway	fibroblast	adherent
Farage	CRL-2630	human	lymph node (metastasis); non-Hodgkin's lymphoma	lymphoblast	suspension
FAT 7	CRL-2109	rat	nasal; squamous cell carcinoma	epithelial	adherent
FB2	CRL-1891	mouse/mouse	hybridoma	lymphoblast	suspension
FB2.K	CRL-6033*	bovine	kidney, fetal		
FB2.Ln	CRL-6034*	bovine	lymph node, fetal		
FB2.Thy	CRL-6036*	bovine	mixed spleen and thymus		
FB3.Ln	CRL-6038*	bovine	lymph node, fetal		
FB3.Thy	CRL-6039*	bovine	thymus, fetal		
FB4.Ln	CRL-6041*	bovine	lymph node, fetal		
FB4.Sp/Thy	CRL-6042*	bovine	mixed spleen and thymus, fetal		
FB5.Bm	CRL-6043*	bovine	bone marrow, fetal		
FB5.Ln	CRL-6044*	bovine	lymph node, fetal		
FB8H3 [Mab8H3]	CRL-2402	mouse/mouse	hybridoma	lymphoblast	suspension
FBHE	CRL-1395	bovine	heart (vascular endothelium), fetal	endothelial	adherent
FC100.Ln	CRL-6117*	cat	cervical lymph node	fibroblast	adherent
FC100.Sp	CRL-6116*	cat	spleen; sarcoma	fibroblast	adherent
FC100.T	CRL-6115*	cat	connective tissue; sarcoma	fibroblast	adherent
FC101	CRL-6118*	cat	whole fetus	fibroblast	adherent
FC102	CRL-6119*	cat	whole fetus	fibroblast	adherent
FC104.We	CRL-6152*	cat	whole fetus	fibroblast	adherent
FC106.We	CRL-6154*	cat	whole fetus	fibroblast	adherent
FC107.We	CRL-6155*	cat	whole fetus	fibroblast	adherent
FC108.We	CRL-6156*	cat	whole fetus	fibroblast	adherent
FC109.We	CRL-6157*	cat	whole fetus	fibroblast	adherent
FC11.BM	CRL-6088*	cat	bone marrow; reticulum cell sarcoma		
FC110.We	CRL-6158*	cat	whole fetus	fibroblast	adherent
FC112	CRL-6120*	cat	whole fetus	fibroblast	adherent
FC113	CRL-6121*	cat	whole fetus	fibroblast	adherent
FC114E.Tr	CRL-6167*	cat	trachea, fetal	fibroblast	adherent
FC115.K	CRL-6122*	cat	kidney	fibroblast	adherent
FC118	CRL-6124*	cat	whole fetus	fibroblast	adherent
FC119	CRL-6125*	cat	whole fetus	fibroblast	adherent
FC16.Sp	CRL-6174*	cat	spleen; lymphoma	fibroblast	adherent
FC2.K	CRL-6126*	cat	kidney	fibroblast	adherent
FC2.Lu	CRL-6569*	cat	lung	fibroblast	adherent
FC28.Lu	CRL-6130*	cat	lung, fetal	fibroblast	adherent
Fc2Lu	CCL-217	cat	lung	mixed	adherent
Fc3Tg	CCL-176	cat	tongue	fibroblast	adherent
FC47	CRL-6094*	cat	placenta	fibroblast	adherent
FC5.K	CRL-6078*	cat	kidney	fibroblast	adherent
FC56.Thy	CRL-6134*	cat	thymus, fetal		
FC57.Thy	CRL-6136*	cat	thymus, fetal		
FC58.Thy	CRL-6137*	cat	thymus, fetal		
FC59.Thy	CRL-6139*	cat	thymus, fetal		
FC6.Bm	CRL-6081*	cat	bone marrow	fibroblast	adherent
FC6.K	CRL-6082*	cat	kidney	fibroblast	adherent
FC60(A).We	CRL-6571*	cat	whole embryo	fibroblast	adherent
FC60(B).We	CRL-6098*	cat	whole fetus	fibroblast	adherent

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Alphanumeric

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FC60A.We	CRL-6140*	cat	whole fetus	fibroblast	adherent
FC60B.We	CRL-6141*	cat	whole fetus	fibroblast	adherent
FC61	CRL-6099*	cat	fetus	fibroblast	adherent
FC63.Res	CRL-6143*	cat	fetus	fibroblast	adherent
FC70.We	CRL-6102*	cat	whole fetus	fibroblast	adherent
FC71A.We	CRL-6145*	cat	whole fetus	fibroblast	adherent
FC77.T	CRL-6105*	cat	connective tissue; fibrosarcoma	fibroblast	adherent
FC79.We	CRL-6106*	cat	whole fetus	fibroblast	adherent
FC81.Sp	CRL-6107*	cat	spleen; fibrosarcoma	fibroblast	adherent
FC81.T	CRL-6108*	cat	connective tissue; fibrosarcoma	fibroblast	adherent
FC81.Thy	CRL-6109*	cat	thymus; fibrosarcoma	fibroblast	adherent
FC83.Res	CRL-6567*	cat	mixed spleen, thymus, and bone marrow	fibroblast	adherent
FC83.Sp	CRL-6110*	cat	spleen; fibrosarcoma	fibroblast	adherent
FC87.Sk	CRL-6150*	cat	skin	fibroblast	adherent
FC94.T	CRL-6113*	cat	connective tissue; fibrosarcoma	fibroblast	adherent
FC95.Thy	CRL-6114*	cat	thymus; osteosarcoma	fibroblast	adherent
Fcwf-4	CRL-2787	cat	whole fetus; macrophage	spindle to stellate	adherent
FD441.8	TIB-213	rat/mouse	hybridoma	lymphoblast	suspension
FDC-P1	CRL-12103†	mouse	bone marrow	lymphoblast	suspension
Fe Bos	CRL-1177	human	skin; Ehlers-Danlos syndrome, type II (hemorrhagic type)	fibroblast	adherent
FeLV-3281	CRL-9116†	cat	lymphoma	lymphoblast	suspension
FeT-1C	CRL-11968†	cat	peripheral blood mononuclear cells, T lymphocytes		suspension
FeT-J	CRL-11967†	cat	peripheral blood mononuclear cells, T lymphocytes		suspension
FHC	CRL-1831	human	colon, fetal	epithelial	adherent
FHCR-1-2075/FH4	HB-8775†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
FHCR-1-2075/FH5	HB-8770†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
FHCR-1-2516/FH7	HB-8861†	mouse/mouse	hybridoma	lymphoblast	suspension
FHCR-1-2624/FH6/ FHOT-1-3019	HB-8873†	mouse/mouse	hybridoma	lymphoblast	suspension
FHCR-1-2813/FDC-6	HB-9018†	mouse/mouse	hybridoma	lymphoblast	suspension
FHM	CCL-42	minnow, fathead	mixed connective tissue and muscle	epithelial	adherent
FHs 173We	HTB-158	human	whole fetus	fibroblast	adherent
FHs 738Lu	HTB-157	human	lung	fibroblast	adherent
FHs 74 Int	CCL-241	human	small intestine	epithelial	adherent
FIB21	HB-295	rat/mouse	hybridoma	lymphoblast	suspension with feeder cells
FIB504.64	HB-293	rat/mouse	hybridoma	lymphoblast	suspension
FIGR	CRL-2173	mouse/mouse	hybridoma	lymphoblast	suspension
FL	CCL-62	human	HeLa contaminant	epithelial	adherent
FL 62891	CRL-11005†	human	liver; immortalized with SV40 large T antigen	fibroblast	adherent
FL74-UCD-1	CRL-8012	cat	lymphoblast; lymphoma	lymphoblast	suspension
FL83B	CRL-2390	mouse	liver	epithelial	adherent
FNS	CRL-6170*	cat	unknown		
FO	CRL-1646	mouse	hybridoma fusion partner	lymphoblast	suspension
FO-4	CRL-6171*	cat	unknown		
FoLu	CCL-168	fox, grey	lung	fibroblast	adherent
FOX-NY	CRL-1732	mouse	hybridoma fusion partner	lymphoblast	suspension
FR	CRL-1213	rat	skin	fibroblast	adherent
FRAN4	HB-10830†	mouse/mouse	hybridoma	lymphoblast	suspension
FRhK-4	CRL-1688	monkey, Rhesus	kidney, fetal	epithelial	adherent
FRTL	CRL-1468	rat	thyroid		adherent
FSHR-18	CRL-2688	mouse/mouse	hybridoma	lymphoblast	suspension
FSHR-323	CRL-2689	mouse/mouse	hybridoma	lymphoblast	suspension
FT	CCL-41	bullfrog	tongue	fibroblast	adherent
F.thy 62891	CRL-10936†	human	thymus; immortalized with SV40 large T antigen	fibroblast	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Fugu eye	CRL-2641	*Fugu rubripes* (torafugu)	eye	epithelial	adherent
Fugu fry	CRL-2642	*Fugu niphobles* (kusafugu)	whole fry	fibroblast	adherent
FW11-10-3	HB-257	mouse/mouse	hybridoma	lymphoblast	suspension
FW11-24-17-36	HB-258	mouse/mouse	hybridoma	lymphoblast	suspension
FW11-9-2	HB-256	mouse/mouse	hybridoma	lymphoblast	suspension
FW3-218-1	HB-261	mouse/mouse	hybridoma	lymphoblast	suspension
FW4-101-1-1	HB-289	mouse/mouse	hybridoma	lymphoblast	suspension
G14D	CRL-2760	channel catfish	peripheral blood, T lymphocyte	lymphoblast	suspension, multicell aggregates
G1B	CRL-2536	catfish; walking	gill	pleomorphic	adherent
G253	HB-9706†	mouse/mouse	hybridoma	lymphoblast	suspension
G26.4.1C3/86	HB-9893†	mouse/mouse	hybridoma	lymphoblast	suspension
G28-5	HB-9110†	mouse/mouse	hybridoma	lymphoblast	suspension
G-292, clone A141B1	CRL-1423	human	bone; osteosarcoma	fibroblast	adherent
G2a.5	HB-110	mouse/mouse	hybridoma	lymphoblast	suspension
G2b.2	HB-109	mouse/mouse	hybridoma	lymphoblast	suspension
G-3-5	CRL-2252	mouse/mouse	hybridoma	lymphoblast	suspension
G355-5	CRL-2033	cat	brain, astrocyte	glial, astrocyte	adherent
G-361	CRL-1424	human	skin; malignant melanoma	epithelial	adherent
G-401	CRL-1441	human	kidney; rhabdoid tumor	epithelial	adherent
G-402	CRL-1440	human	kidney; renal leiomyoblastoma		adherent
G-7	CRL-1447	mouse	skeletal muscle, fetal	myoblast	adherent on coated surface
G-8	CRL-1456	mouse	skeletal muscle, fetal	myoblast	adherent
Ga Va	CRL-1394	human	skin; Ehlers-Danlos syndrome	fibroblast	adherent
GA-10	CRL-2392	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
GA-10 (Clone 20)	CRL-2394	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
GA-10 (Clone 4)	CRL-2393	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
GAD-1	HB-184	mouse/mouse	hybridoma	lymphoblast	suspension
Gam Per	CRL-1326	human	skin; Ehlers-Danlos syndrome, possible heterozygote	fibroblast	adherent
γ3-11.1	HB-8700†	mouse/mouse	hybridoma	lymphoblast	suspension
GAP 8.3	HB-12	mouse/mouse	hybridoma	lymphoblast	suspension
GAP A3	HB-122	mouse/mouse	hybridoma	lymphoblast	suspension
Gap Per	CRL-1335	human	skin; Ehlers-Danlos syndrome, possible heterozygote	fibroblast	adherent
GC-1 spg	CRL-2053	mouse (transgenic)	testis; spermatogonia	epithelial	adherent
GC-2spd(ts)	CRL-2196	mouse	spermatocyte; SV40 large T antigen transfected	epithelial	adherent
GCT	TIB-223	human	lung (metastasis); fibrous histiocytoma (primary unknown)		adherent
Gd1T	CRL-6180*	chicken	unknown		
Gd1WE	CRL-6181*	chicken	embryo		
GDM-1	CRL-2627	human	peripheral blood; monoblast; myelomonoblastic leukemia	lymphoblast	suspension
Gekko lung-1	CCL-111	lizard, gekko	lung	epithelial	adherent
GeLu	CCL-100	gerbil, Mongolian	lung	fibroblast	adherent
Genox 3.53	HB-103	mouse/mouse	hybridoma	lymphoblast	suspension
GFPu-1	CRL-2794	human	kidney; transformed with adenovirus 5 DNA	epithelial	adherent
GH_1	CCL-82	rat	pituitary tumor	epithelial	adherent
GH_3	CCL-82.1	rat	pituitary tumor	epithelial	adherent
GH329	CRL-13002†	human	HeLa transformed with adenovirus E1a and E1b	epithelial	suspension
GH354	CRL-13003†	human	cervix; generates E1-deleted adenovirus vectors	epithelial	adherent
GH_4C_1	CCL-82.2	rat	pituitary tumor	epithelial	adherent
GK1.5	TIB-207	rat/mouse	hybridoma	lymphoblast	suspension
GK-5	CRL-1834	human	hybridoma fusion partner	lymphoblast	suspension
GL1	HB-253	rat/mouse	hybridoma	lymphoblast	suspension
GL7	HB-254	rat/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
glomotel	CRL-2597	human	kidney (glomus); glomangioma; immortalized with hTERT	fibroblast	adherent
GMMe [EPI]	CRL-2674	mink	uterus (endometrium)	epithelial	adherent
GMMs [STR]	CRL-2675	mink	uterus (endometrium)	fibroblast	adherent
Go Je	CRL-1381	human	skin; Ehlers-Danlos syndrome, variant type	fibroblast	adherent
G-Olig2	SCRC-1037	mouse	lineage-specific GFP expression	spherical colony	adherent
GP+E-86	CRL-9642†	mouse	embryo; ecotropic retroviral packaging line	fibroblast	adherent
GP+envAM-12	CRL-9641†	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
GPC-16	CCL-242	guinea pig	colon; colorectal adenocarcinoma	epithelial	adherent
GR-20	CRL-2024	rat/mouse	hybridoma	lymphoblast	suspension
Gr431	HB-8575†	human/mouse	hybridoma	lymphoblast	suspension
GR-96	CRL-2013	rat/mouse	hybridoma	lymphoblast	suspension
GS-109-IV-8	CRL-1672	human	skin; Gardner's syndrome	fibroblast	adherent
GS-109-V-20	CRL-1610	human	skin; Gardner's syndrome	fibroblast	adherent
GS-109-V-21	CRL-1643	human	skin; Gardner's syndrome	fibroblast	adherent
GS-109-V-34	CRL-1613	human	skin; Gardner's syndrome	fibroblast	adherent
GS-109-V-63	CRL-1614	human	skin; Gardner's syndrome	fibroblast	adherent
GSML	CRL-2699	monkey, Guyanese squirrel	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
H1.6	CRL-2567	mouse/mouse	hybridoma	lymphoblast	suspension
H16-L10-4R5	HB-65	mouse/mouse	hybridoma	lymphoblast	suspension
H18/7	HB-11684†	mouse/mouse	hybridoma	lymphoblast	suspension
H19-7/IGF-IR	CRL-2526	rat	hippocampus	fibroblast	adherent
H1HeLa	CRL-1958	human	cervix; adenocarcinoma	epithelial	adherent
H2.35	CRL-1995	mouse	liver; hepatocyte; SV40 transformed	epithelial	adherent
H2.8	CRL-2568	mouse/mouse	hybridoma	lymphoblast	suspension
H21F8-1	CRL-8018†	mouse/mouse	hybridoma	lymphoblast	suspension
H25B10	CRL-8017†	mouse/mouse	hybridoma	lymphoblast	suspension
H25B10	CRL-8017A†	mouse/mouse	hybridoma	lymphoblast	suspension
H3.1	CRL-2569	mouse/mouse	hybridoma	lymphoblast	suspension
H36.12a	CRL-2445	mouse/mouse	macrophage; hybrid	macrophage	mixed
H36.12b	CRL-2446	mouse/mouse	macrophage; hybrid	macrophage	mixed
H36.12d	CRL-2447	mouse/mouse	macrophage; hybrid	macrophage	mixed
H36.12e	CRL-2448	mouse/mouse	macrophage; hybrid	macrophage	mixed
H36.12j	CRL-2449	mouse/mouse	macrophage; hybrid	macrophage	mixed
H4	HTB-148	human	brain; neuroglioma	epithelial	adherent
H-4-II-E	CRL-1548	rat	liver; hepatoma	epithelial	adherent
H4-II-E-C3	CRL-1600	rat	liver; hepatoma	epithelial	adherent
H4TG	CRL-1578	rat	liver; hepatoma	epithelial	adherent
H57-597	HB-218	hamster/mouse	hybridoma	lymphoblast	suspension
H69AR	CRL-11351†	human	lung; carcinoma; small cell lung cancer; multidrug resistant	epithelial	adherent
H9	HTB-176	human	peripheral blood, T lymphocyte; cutaneous; lymphoma	lymphoblast	suspension
H9/HTLV-IIIB	CRL-8543†	human	T lymphocyte; lymphoma	lymphoblast	suspension
H9c2(2-1)	CRL-1446	rat	heart (myocardium)	myoblast	adherent
HAA1	HB-8534†	human/human	hybridoma	lymphoblast	suspension
HAAE-1	CRL-2472†	human	abdominal aorta	endothelial	adherent
HAAE-2	CRL-2473†	human	abdominal aorta	endothelial	adherent
Ha Fe	CRL-1396	human	skin; cutis laxa	fibroblast	adherent
HaK	CCL-15	hamster, Syrian golden	kidney	epithelial	adherent
HB	CRL-7729*	human	skin; epidermolysis bullosa simplex	fibroblast	adherent
HBE135-E6E7	CRL-2741	human	lung, bronchus; HPV-16 E6/E7 transformed	epithelial	adherent
HBE4-E6/E7	CRL-2078	human	lung (bronchus)	epithelial	adherent
HBE4-E6/E7-C1	CRL-2079	human	lung (bronchus)	epithelial	adherent
HCC1007 BL	CRL-2319	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1008	CRL-2320	human	lymph node (metastasis); ductal carcinoma (mammary gland primary)	epithelial	adherent
HCC1143	CRL-2321	human	mammary gland; primary ductal carcinoma	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
HCC1143 BL	CRL-2362	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1187	CRL-2322	human	mammary gland; primary ductal carcinoma	epithelial	mixed
HCC1187 BL	CRL-2323	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1395	CRL-2324	human	mammary gland; primary ductal carcinoma	epithelial	adherent
HCC1395 BL	CRL-2325	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1419	CRL-2326	human	mammary gland; primary ductal carcinoma	epithelial	adherent, patchy
HCC1428	CRL-2327	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	epithelial	adherent
HCC1428 BL	CRL-2328	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1500	CRL-2329	human	mammary gland; primary ductal carcinoma	epithelial	adherent
HCC1569	CRL-2330	human	mammary gland; primary metaplastic carcinoma	epithelial	adherent
HCC1599	CRL-2331	human	mammary gland; primary ductal carcinoma	epithelial	clusters in suspension
HCC1599 BL	CRL-2332	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1739 BL	CRL-2334	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1806	CRL-2335	human	mammary gland; primary acantholytic squamous cell carcinoma	epithelial	adherent
HCC1937	CRL-2336	human	mammary gland; primary ductal carcinoma	epithelial	adherent
HCC1937 BL	CRL-2337	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC1954	CRL-2338	human	mammary gland; ductal carcinoma	epithelial	adherent
HCC1954 BL	CRL-2339	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC202	CRL-2316	human	mammary gland; primary ductal carcinoma	epithelial	mixed
HCC2157	CRL-2340	human	mammary gland; primary ductal carcinoma	epithelial	suspension
HCC2157 BL	CRL-2341	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC2218	CRL-2343	human	mammary gland; primary ductal carcinoma	epithelial	clusters in suspension
HCC2218 BL	CRL-2363	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC2935	CRL-2869	human	lung, pleural effusion	epithelial	adherent
HCC38	CRL-2314	human	mammary gland; primary ductal carcinoma	epithelial	adherent
HCC38 BL	CRL-2346	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
HCC4006	CRL-2871	human	pleural effusion (metastasis); adenocarcinoma (lung primary)	epithelial	adherent
HCC70	CRL-2315	human	mammary gland; primary ductal carcinoma	epithelial	adherent
HCC827	CRL-2868	human	lung; adenocarcinoma	epithelial	adherent
hCD40L-M90	HB-12055†	mouse/mouse	hybridoma	lymphoblast	suspension
hCD40L-M91	HB-12056†	mouse/mouse	hybridoma	lymphoblast	suspension
HCE-2	CRL-11135†	human	eye (cornea); AdV12-SV40 transformed	epithelial	adherent
HCN-1A	CRL-10442†	human	brain, cortical neuron	neuronal	adherent
HCN-2	CRL-10742†	human	brain, cortical neuron	neuronal	adherent
HCT 116	CCL-247	human	colon; colorectal carcinoma	epithelial	adherent on feeder cells
HCT-15	CCL-225	human	colon; colorectal adenocarcinoma	epithelial	adherent
HCT-8 (HRT-18)	CCL-244	human	colon; ileocecal colorectal adenocarcinoma	epithelial	adherent
HD168	HB-252	rat/mouse	hybridoma	lymphoblast	suspension
HD2-4	HB-86	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
He We	CRL-1338	human	skin; stiff skin syndrome	fibroblast	adherent
HEC-1-A	HTB-112	human	uterus (endometrium); adenocarcinoma	epithelial	adherent
HEC-1-B	HTB-113	human	uterus (endometrium); adenocarcinoma	epithelial	adherent
HECA-452	HB-11485†	rat/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
HEK001	CRL-2404	human	skin, keratinocyte; HPV-16 E6/E7 transformed	epithelial	adherent
HEL 299	CCL-137	human	lung, fetal	fibroblast	adherent
HEL 92.1.7	TIB-180	human	bone marrow, erythroblast; erythroleukemia	lymphoblast	suspension
HeLa	CCL-2	human	cervix; adenocarcinoma	epithelial	adherent
HeLa 229	CCL-2.1	human	cervix; adenocarcinoma	epithelial	adherent
HeLa NR1	CRL-13011†	human	cervix; HeLa cells transfected with plasmid pSV2neoNR101	epithelial	adherent
HeLa S3	CCL-2.2	human	cervix; adenocarcinoma	epithelial	adherent
HE-LU(Rifkin)	CRL-7717*	human	lung, fetal	fibroblast	adherent
Hep 3B2.1-7	HB-8064†	human	liver; hepatocellular carcinoma	epithelial	adherent
Hep G2	HB-8065†	human	liver; hepatocellular carcinoma	epithelial	adherent
HEP G2/2.2.1	CRL-11997†	human	liver; hepatocellular carcinoma; transfected with a CYP7 minigene/luciferase construct	epithelial	adherent
HEp-2	CCL-23	human	HeLa contaminant	epithelial	adherent
Hepa 1-6	CRL-1830	mouse	liver; hepatoma	epithelial	adherent
Hepa-1c1c7	CRL-2026	mouse	liver; hepatoma	epithelial	adherent
HEPM	CRL-1486	human	palatal mesenchyme, fetal	fibroblast	adherent
Hermes-3	HB-9480†	mouse/mouse	hybridoma	lymphoblast	suspension
hES BG01V	SCRC-2002	human	variant of human embryonic stem cell line BG01	spherical colony	adherent
HE-SK	CRL-7718*	human	skin, fetal	fibroblast	adherent
Het-1A	CRL-2692	human	esophagus; SV40 large T antigen transfected	epithelial	adherent
HF 282.Sp	CRL-7701*	human	spleen, fetal		
HF 322.Sk	CRL-7703*	human	skin, fetal	fibroblast	adherent
HF 333.We	CRL-7706*	human	whole fetus	fibroblast	adherent
HF 345.We	CRL-7708*	human	whole fetus	fibroblast	adherent
HF 358.We	CRL-7709*	human	whole fetus	mixed	adherent
HFAE-2	CRL-2474†	human	femoral artery	endothelial	adherent
HFF-1	SCRC-1041	human	foreskin fibroblasts, newborn; feeder layer	fibroblast	adherent
HFF-2	SCRC-1042	human	foreskin fibroblasts, newborn; feeder layer	fibroblast	adherent
HFL1	CCL-153	human	lung, fetal	fibroblast	adherent
HFN 36.3	CRL-1605	mouse/mouse	hybridoma	lymphoblast	suspension
HFN 7.1	CRL-1606	mouse/mouse	hybridoma	lymphoblast	suspension
hFOB 1.19	CRL-11372†	human	bone, osteoblast; SV40 large T antigen transfected		adherent
HG-261	CCL-122	human	skin; Fanconi anemia	fibroblast	adherent
HGF-1	CRL-2014	human	gingiva	fibroblast	adherent
HGH-B	HB-10596†	mouse/mouse	hybridoma	lymphoblast	suspension
HH	CRL-2105	human	peripheral blood, T lymphocyte; cutaneous T cell	lymphoblast	suspension
HIAE-101	CRL-2478	human	iliac artery	endothelial	adherent
HIAE-38	CRL-2599	human	iliac artery	endothelial	adherent
HIAE-55	CRL-2608	human	iliac artery	endothelial	adherent
HIAE-65	CRL-2606	human	iliac artery	endothelial	adherent
HIAE-78	CRL-2475	human	iliac artery	endothelial	adherent
HIG-82	CRL-1832	rabbit	synovium	fibroblast	adherent
HIIF-D	CRL-8200†	hamster, Chinese	ovary; produces human gamma interferon	epithelial	adherent
HIL12R1.2B10	CRL-2359	rat/mouse	hybridoma	lymphoblast	suspension
hIL-15-M110	HB-12061†	mouse/mouse	hybridoma	lymphoblast	suspension
hIL-15-M111	HB-12062†	mouse/mouse	hybridoma	lymphoblast	suspension
HIT-T15	CRL-1777	hamster, Syrian golden	pancreas (islet of Langerhans); beta cell	epithelial	adherent
HIVE-26	CRL-2603	human	iliac vein	endothelial	adherent
HIVE-55	CRL-2609	human	iliac vein	endothelial	adherent
HIVE-65	CRL-2605	human	iliac vein	endothelial	adherent
HIVE-78	CRL-2476	human	iliac vein	endothelial	adherent
HIVS-125	CRL-2482	human	iliac vein, smooth muscle		adherent
HJ1.Ov	CRL-6274*	tahr	ovary	epithelial	adherent
HJ2.Lu	CRL-6277*	tahr	lung, fetal		
HKB-11	CRL-12568	human	kidney, B cell; Burkitt's lymphoma	epithelial	adherent
HK-2	CRL-2190	human	kidney (cortex, proximal tubule); HPV-16 transformed	epithelial	adherent
HK-PEG-1	CL-189	mouse/mouse	hybridoma	lymphoblast	suspension
HL-60	CCL-240	human	peripheral blood; promyeloblast; acute promyelocytic leukemia	myeloblastic	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
HL-60/MX1	CRL-2258	human	peripheral blood; promyeloblast; acute promyelocytic leukemia	lymphoblast	suspension
HL-60/MX2	CRL-2257	human	peripheral blood; promyeloblast; acute promyelocytic leukemia	lymphoblast	suspension
HLF-a	CCL-199	human	lung; epidermoid carcinoma	fibroblast	adherent
HM2	HB-8587†	human/human	hybridoma	lymphoblast	suspension
HMCB (Human Melanoma Cell Bowes)	CRL-9607†	human	skin; melanoma	epithelial	adherent
HMy2.CIR	CRL-1993	human	B lymphoblast	lymphoblast	suspension
HNK-1	TIB-200	mouse/mouse	hybridoma	lymphoblast	suspension
HO-13-4	TIB-99	mouse/mouse	hybridoma	lymphoblast	suspension
HO-2.2	TIB-150	mouse/mouse	hybridoma	lymphoblast	suspension
HO-22-1	TIB-100	mouse/mouse	hybridoma	lymphoblast	suspension
HOPC 1F/12	TIB-13	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
Horse	CRL-6583*	horse	unknown		
HOS	CRL-1543	human	bone; osteosarcoma	mixed, fibroblast and epithelial-like	adherent
HP	CRL-12012†	human	fibrosarcoma; transfected; polytropic retroviral packaging cell line		adherent

ATCC Cell Biology Trivia #6

Who first crystallized tobacco mosaic virus?

Wendell Stanley crystallized tobacco mosaic virus in 1935. His work brought a new dimension to the study of viruses. Are they infectious organisms or large molecules?

HP6000	CRL-1754	mouse/mouse	hybridoma	lymphoblast	suspension
HP6001	CRL-1755	mouse/mouse	hybridoma	lymphoblast	suspension
HP6002	CRL-1788	mouse/mouse	hybridoma	lymphoblast	suspension
HP6003	CRL-1756	mouse/mouse	hybridoma	lymphoblast	suspension
HP6014	CRL-1752	mouse/mouse	hybridoma	lymphoblast	suspension
HP6016	CRL-1787	mouse/mouse	hybridoma	lymphoblast	suspension
HP6017	CRL-1753	mouse/mouse	hybridoma	lymphoblast	suspension
HP6020	CRL-1789	mouse/mouse	hybridoma	lymphoblast	suspension
HP6023	CRL-1776	mouse/mouse	hybridoma	lymphoblast	suspension
HP6025	CRL-1775	mouse/mouse	hybridoma	lymphoblast	suspension
HP6045	CRL-1757	mouse/mouse	hybridoma	lymphoblast	suspension
HP6047	CRL-1774	mouse/mouse	hybridoma	lymphoblast	mixed
HP6050	CRL-1768	mouse/mouse	hybridoma	lymphoblast	suspension
HP6053	CRL-1758	mouse/mouse	hybridoma	lymphoblast	suspension
HP6054	CRL-1763	mouse/mouse	hybridoma	lymphoblast	suspension
HP6058	CRL-1786	mouse/mouse	hybridoma	lymphoblast	suspension
HPAC	CRL-2119	human	pancreas; adenocarcinoma	epithelial	adherent
HPAE-26	CRL-2598	human	pulmonary artery	endothelial	adherent
HPAF-II	CRL-1997	human	pancreas; adenocarcinoma	epithelial	adherent
HPME	CRL-6589*	mouse	whole embryo	fibroblast	adherent
HPVE-26	CRL-2607	human	pulmonary vein	endothelial	adherent
HR/+ A.Sp	CRL-6347*	mouse	spleen		

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
HR/+ C.Sp	CRL-6349*	mouse	spleen		
HR/+ D.Sp	CRL-6350*	mouse	spleen		
HR/+ E.Sp	CRL-6351*	mouse	spleen		
HR/+ F.Sp	CRL-6352*	mouse	spleen		
HR/+ G.Sp	CRL-6353*	mouse	spleen		
HR/+B.Sp	CRL-6348*	mouse	spleen		
hr/hr (WE) A	CRL-6357*	mouse	embryo		
hr/hr (WE) B	CRL-6358*	mouse	embryo		
HR/HR 1.Sp	CRL-6354*	mouse	spleen		
HR/HR 2.Sp	CRL-6355*	mouse	spleen		
HR/HR 3.Sp	CRL-6356*	mouse	spleen		
HRT-18G	CRL-11663†	human	rectum; ileocecal colorectal adenocarcinoma	epithelial	adherent
Hs 1.Int	CRL-7820*	human	intestine	fibroblast	adherent
Hs 1.Lu	CRL-7000*	human	lung	fibroblast	adherent
Hs 1.Sk/Mu	CRL-7001*	human	mixed skin and muscle	fibroblast	adherent
Hs 1.Tes	CRL-7002*	human	testis	fibroblast	adherent
Hs 103.Sp/Th	CRL-7068*	human	mixed spleen and thymus	fibroblast	adherent
Hs 104.Sp/Th	CRL-7070*	human	mixed spleen and thymus	fibroblast	adherent
Hs 112.Sk	CRL-7074*	human	skin	fibroblast	adherent
Hs 115.Lu	CRL-7077*	human	lung or bronchus	fibroblast	adherent
Hs 127.T	CRL-7081*	human	connective tissue; giant cell sarcoma	fibroblast	adherent
Hs 13.Sk	CRL-7011*	human	skin	fibroblast	adherent
Hs 132.T	CRL-7085*	human	connective tissue; spindle cell sarcoma	fibroblast	adherent
Hs 137.Fs	CRL-7087*	human	skin (foreskin)	fibroblast	adherent
Hs 14.T	CRL-7823*	human	bone; osteosarcoma	fibroblast	adherent
Hs 142.Sp	CRL-7090*	human	spleen; Down syndrome	fibroblast	adherent
Hs 142.Th	CRL-7091*	human	thymus; Down syndrome	fibroblast	adherent
Hs 143.We	CRL-7092*	human	whole fetus	fibroblast	adherent
Hs 144.We	CRL-7093*	human	whole fetus	fibroblast	adherent
Hs 15.T	CRL-7824*	human	connective tissue; fibrosarcoma	fibroblast	adherent
Hs 154.Fs	CRL-7098*	human	skin (foreskin)	fibroblast	adherent
Hs 156.T	CRL-7102*	human	skin; xanthogranuloma	fibroblast	adherent
Hs 165.Fs	CRL-7118*	human	skin (foreskin)	fibroblast	adherent
Hs 168.Fs	CRL-7122*	human	skin (foreskin)	fibroblast	adherent
Hs 172.T	CRL-7833*	human	urinary bladder; carcinoma	fibroblast	adherent
Hs 173.Sp	CRL-7123*	human	spleen	fibroblast	adherent
Hs 173.We	CRL-7834*	human	whole fetus	fibroblast	adherent
Hs 174.We	CRL-7124*	human	whole fetus	fibroblast	adherent
Hs 18.Fs	CRL-7014*	human	skin (foreskin)	fibroblast	adherent
Hs 181.Sk	CRL-7129*	human	skin	fibroblast	adherent
Hs 181.Tes	CRL-7131*	human	testis	fibroblast	adherent
Hs 184.Sk	CRL-7133*	human	skin	fibroblast	adherent
Hs 184.T	CRL-7134*	human	bone; osteosarcoma	fibroblast	adherent
Hs 186.Sk	CRL-7138*	human	skin	fibroblast	adherent
Hs 188.T	CRL-7140*	human	bone; osteosarcoma	fibroblast	adherent
Hs 190.T	CRL-7145*	human	mammary gland; cancer	fibroblast	adherent
Hs 193.Sp	CRL-7148*	human	spleen	fibroblast	adherent
Hs 195.T	CRL-7150*	human	urinary bladder; carcinoma	epithelial	adherent
Hs 198.Ton	CRL-7156*	human	tonsil	fibroblast	adherent
Hs 2.We	CRL-7003*	human	whole fetus	fibroblast	adherent
Hs 200.T	CRL-7159*	human	rectum; colorectal adenocarcinoma	fibroblast	adherent
Hs 201.Sk	CRL-7161*	human	skin	fibroblast	adherent
Hs 202.Sp	CRL-7162*	human	spleen	fibroblast	adherent
Hs 202.Th	CRL-7163*	human	thymus	fibroblast	adherent
Hs 203.Sp	CRL-7164*	human	spleen	fibroblast	adherent
Hs 203.Th	CRL-7165*	human	thymus	fibroblast	adherent
Hs 204.Sp	CRL-7166*	human	spleen	fibroblast	adherent
Hs 208.Sp	CRL-7169*	human	spleen	fibroblast	adherent
Hs 208.Th	CRL-7170*	human	thymus	fibroblast	adherent
Hs 209.Sp	CRL-7171*	human	spleen	fibroblast	adherent
Hs 21.Fs	CRL-7015*	human	skin (foreskin)	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 212.M	CRL-7173*	human	connective tissue; fascia	fibroblast	adherent
Hs 215.Ln	CRL-7175*	human	mesenteric lymph node; abnormal	fibroblast	adherent
Hs 215.Sp	CRL-7176*	human	spleen; abnormal	fibroblast	adherent
Hs 215.Th	CRL-7177*	human	thymus; abnormal	fibroblast	adherent
Hs 216.We	CRL-7178*	human	whole fetus	fibroblast	adherent
Hs 218.Lu	CRL-7180*	human	lung	fibroblast	adherent
Hs 219.T	CRL-7184*	human	rectum; colorectal adenocarcinoma	fibroblast	adherent
Hs 221.Sp	CRL-7187*	human	spleen	fibroblast	adherent
Hs 221.Th	CRL-7188*	human	thymus	fibroblast	adherent
Hs 222.Sp	CRL-7189*	human	spleen	fibroblast	adherent
Hs 225.Th	CRL-7191*	human	thymus	fibroblast	adherent
Hs 228.T	CRL-7193*	human	urinary bladder; carcinoma	fibroblast	adherent
Hs 229.T	CRL-7194*	human	lung; bronchogenic adenocarcinoma	fibroblast	adherent
Hs 230.Sp	CRL-7196*	human	spleen	fibroblast	adherent
Hs 230.Th	CRL-7195*	human	thymus	fibroblast	adherent
Hs 232.Sp	CRL-7198*	human	spleen	fibroblast	adherent
Hs 232.Th	CRL-7197*	human	thymus	fibroblast	adherent
Hs 234.Th	CRL-7200*	human	thymus	fibroblast	adherent
Hs 235.Sk	CRL-7201*	human	mixed skin and muscle	fibroblast	adherent
Hs 238.Sk	CRL-7203*	human	mixed skin and muscle	fibroblast	adherent
Hs 24.Fs	CRL-7016*	human	skin (foreskin)	fibroblast	adherent
Hs 255.T	CRL-7213*	human	colon; adenocarcinoma	fibroblast	adherent
Hs 257.T	CRL-7214*	human	colon; colorectal adenocarcinoma		adherent
Hs 268.T	CRL-7218*	human	lymph node; lymphogranulomatosis	fibroblast	adherent
Hs 274.T	CRL-7222*	human	mammary gland; adenocarcinoma	fibroblast	adherent
Hs 275.Sk	CRL-7223*	human	skin	fibroblast	adherent
Hs 277.T	CRL-7225*	human	lymph node; abnormal	fibroblast	adherent
Hs 280.T	CRL-7226*	human	mammary gland; adenocarcinoma	fibroblast	adherent
Hs 281.T	CRL-7227*	human	mammary gland; adenocarcinoma	fibroblast	adherent
Hs 284.Pe	CRL-7228*	human	pleural effusion (metastasis); epidermoid carcinoma (lung primary)	fibroblast	adherent
Hs 294T	HTB-140	human	lymph node (metastatic); amelonotic melanoma (skin primary)	mixed, stellate and polygonal	adherent
Hs 295.Sk	CRL-7232*	human	skin	fibroblast	adherent
Hs 295.T	CRL-7233*	human	skin; dermatofibrosarcoma protuberans	fibroblast	adherent
Hs 3.Sk	CRL-7006*	human	skin	fibroblast	adherent
Hs 3.T	CRL-7005*	human	bone; osteosarcoma	fibroblast	adherent
Hs 313.T	CRL-7235*	human	lymph node; lymphoma	fibroblast	adherent
Hs 319.T	CRL-7236*	human	mammary gland; cancer	fibroblast	adherent
Hs 324.T	CRL-7239*	human	lymph node; reticulum cell sarcoma		mixed
Hs 325.Ln	CRL-7240*	human	lymph node; chronic lymphadenitis	fibroblast	adherent
Hs 329.T	CRL-7242*	human	mammary gland; cancer	fibroblast	adherent
Hs 343.T	CRL-7245*	human	mammary gland; adenocarcinoma	fibroblast	adherent
Hs 344.T	CRL-7246*	human	mammary gland; cancer	fibroblast	adherent
Hs 350.T	CRL-7248*	human	mammary gland; cancer	fibroblast	adherent
Hs 357.T	CRL-7252*	human	skin; dermatofibrosarcoma	fibroblast	adherent
Hs 362.T	CRL-7253*	human	mammary gland; adenocarcinoma		adherent
Hs 364.Ct	CRL-7254*	human	connective tissue; fascia	fibroblast	adherent
Hs 365.Ct	CRL-7255*	human	connective tissue; fascia	fibroblast	adherent
Hs 371.T	CRL-7256*	human	mammary gland; cancer	fibroblast	adherent
Hs 372.Sk	CRL-7257*	human	skin	fibroblast	adherent
Hs 38.T	CRL-7826*	human	ovary; carcinoma	fibroblast	adherent
Hs 383.Sk	CRL-7842*	human	skin	fibroblast	adherent
Hs 387.T	CRL-7263*	human	bone; osteosarcoma	mixed	adherent
Hs 389(A).Lu	CRL-7265*	human	lung	fibroblast	adherent
Hs 389(B).Lu	CRL-7266*	human	lung	fibroblast	adherent
Hs 39.T	CRL-7023*	human	bone; osteosarcoma	fibroblast	adherent
Hs 391.We	CRL-7267*	human	whole fetus	fibroblast	adherent
Hs 392.Sk	CRL-7268*	human	skin	fibroblast	adherent
Hs 394.Lu	CRL-7269*	human	lung	fibroblast	adherent
Hs 394.Sk	CRL-7270*	human	mixed skin and muscle	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 395.We	CRL-7271*	human	whole fetus	fibroblast	adherent
Hs 397.Lu	CRL-7272*	human	lung		adherent
Hs 399.Li	CRL-7274*	human	liver; abnormal		
Hs 401.Lu	CRL-7275*	human	lung	fibroblast	adherent
Hs 402.Sk	CRL-7276*	human	skin		
Hs 404.Sk	CRL-7278*	human	skin		
Hs 405.Sk	CRL-7279*	human	skin		
Hs 409.We	CRL-7281*	human	whole fetus		
Hs 410.We	CRL-7282*	human	whole fetus	fibroblast	adherent
Hs 412.Lu	CRL-7285*	human	lung or bronchus		
Hs 413.We	CRL-7286*	human	whole fetus	fibroblast	
Hs 414.T	CRL-7287*	human	lymph node (metastasis); fibrosarcoma mixed (connective tissue primary)		adherent
Hs 415.Sk	CRL-7288*	human	skin	fibroblast	adherent
Hs 416.T	CRL-7289*	human	skin; squamous papilloma		adherent
Hs 417.Lu	CRL-7291*	human	lung (bronchus)		
Hs432.T	CRL-7299	human	skin; melanoma		
Hs 443.T	CRL-7300*	human	lymph node; reactive hyperplasia		
Hs 445	HTB-146	human	lymph node; lymphoma; Hodgkin's disease	lymphoblast	suspension
Hs 446.Sk	CRL-7801*	human	skin	fibroblast	adherent
Hs 45.Fs	CRL-7025*	human	skin (foreskin)	fibroblast	adherent
Hs 454.T	CRL-7802*	human	bone; eosinophilic granuloma	fibroblast	adherent
Hs 456.Bt	CRL-7805*	human	skin; benign lesion		
Hs 456.Sk	CRL-7804*	human	skin		adherent
Hs 46.Fs	CRL-7026*	human	skin (foreskin)	fibroblast	adherent
Hs 466.Sk	CRL-7807*	human	skin (scalp)	fibroblast	adherent
Hs 467.Sk	CRL-7808*	human	skin	fibroblast	adherent
Hs 468.Lu	CRL-7810*	human	lung	fibroblast	adherent
Hs 469.Sk	CRL-7811*	human	skin	fibroblast	adherent
Hs 479.T	CRL-7813*	human	mammary gland; cancer	fibroblast	adherent
Hs 48.Fs	CRL-7027*	human	skin (foreskin)	fibroblast	adherent
Hs 483.Sk	CRL-7815*	human	skin	fibroblast	adherent
Hs 483.T	CRL-7814*	human	skin; chronic dermatitis	fibroblast	adherent
Hs 49.Fs	CRL-7028*	human	skin (foreskin)	fibroblast	adherent
Hs 491.T	CRL-7818*	human	lymph node; lymphocytic lymphoma	fibroblast	adherent
Hs 5.T	CRL-7822*	human	connective tissue; leiomyosarcoma	fibroblast	adherent
Hs 505.T	CRL-7306*	human	lymph node; lymphocytic lymphoma	fibroblast	adherent
Hs 507.Sk	CRL-7307*	human	skin	fibroblast	adherent
Hs 517.Sk	CRL-7311*	human	skin	fibroblast	adherent
Hs 518.T	CRL-7313*	human	spleen; lymphocytic lymphoma	fibroblast	adherent
Hs 52.Sk	CRL-7031*	human	skin; Down syndrome	fibroblast	adherent
Hs 52.Th	CRL-7032*	human	thymus; Down syndrome	fibroblast	adherent
Hs 523.Sk	CRL-7314*	human	skin	fibroblast	adherent
Hs 53.T	CRL-7033*	human	mouth; non-neoplastic tumor	fibroblast	adherent
Hs 531.Sk	CRL-7315*	human	skin	fibroblast	adherent
Hs 540.T	CRL-7316*	human	mammary gland; carcinoma	fibroblast	adherent
Hs 544..Sk	CRL-7317*	human	skin	fibroblast	adherent
Hs 545.Sk	CRL-7318*	human	skin	fibroblast	adherent
Hs 548.Sk	CRL-7320*	human	skin	fibroblast	adherent
Hs 55.Fs	CRL-7035*	human	skin (foreskin)	fibroblast	adherent
Hs 556.Sk	CRL-7321*	human	skin	fibroblast	adherent
Hs 559.Sk	CRL-7323*	human	skin	fibroblast	adherent
Hs 56.Fs	CRL-7036*	human	skin (foreskin)	fibroblast	adherent
Hs 564(E).Mg	CRL-7329*	human	mammary gland		
Hs 565(A).Mg	CRL-7330*	human	mammary gland; cyst		
Hs 565(D).Mg	CRL-7333*	human	mammary gland; cyst		
Hs 566(B).T	CRL-7336*	human	mammary gland; carcinoma		
Hs 568.We	CRL-7340*	human	whole fetus	fibroblast	adherent
Hs 57.T	CRL-7037*	human	lung; sarcoma or lymphoma	fibroblast	adherent
Hs 571.T	CRL-7846*	human	ovary; carcinoma	fibroblast	adherent
Hs 573.Lu	CRL-7344*	human	lung	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 573.T	CRL-7343*	human	lung; cancer	fibroblast	adherent
Hs 574.Sk	CRL-7346*	human	skin	fibroblast	adherent
Hs 574.T	CRL-7345*	human	mammary gland; ductal carcinoma	fibroblast	adherent
Hs 578Bst	HTB-125	human	mammary gland	fibroblast	adherent
Hs 578T	HTB-126	human	mammary gland; ductal carcinoma	epithelial	adherent
Hs 579.Mg	CRL-7347*	human	mammary gland		
Hs 58.Fs	CRL-7038*	human	skin (foreskin)	fibroblast	adherent
Hs 587.Int	CRL-7352*	human	colon; colorectal adenocarcinoma		
Hs 588.T	CRL-7850*	human	cervix; adenocarcinoma		adherent
Hs 590.We	CRL-7353*	human	whole fetus	fibroblast	adherent
Hs 60.Fs	CRL-7040*	human	skin (foreskin)	fibroblast	adherent
Hs 600.T	CRL-7360*	human	skin; melanoma		adherent
Hs 602	HTB-142	human	cervical lymph node; lymphoma	single spherical or small clusters	suspension
Hs 604.T	CRL-7362*	human	lymph node; lymphoma; Hodgkin's disease	fibroblast	adherent
Hs 605.Sk	CRL-7364*	human	skin	fibroblast	adherent
Hs 605.T	CRL-7365*	human	mammary gland; carcinoma	fibroblast	adherent
Hs 606	CRL-7368*	human	mammary gland; carcinoma	fibroblast	adherent
Hs 606.Sk	CRL-7367*	human	skin	fibroblast	adherent
Hs 61.Fs	CRL-7041*	human	skin (foreskin)	fibroblast	adherent
Hs 610.Sk	CRL-7372*	human	skin; DiGeorge syndrome	fibroblast	adherent
Hs 611.T	CRL-7373*	human	lymph node, spleen; lymphoma; Hodgkin's disease	lymphoblast	mixed
Hs 613.Sk	CRL-7375*	human	skin		
Hs 616.T	CRL-7378*	human	lymph node,thymus; lymphoma; Hodgkin's disease		adherent
Hs 617.Mg	CRL-7379*	human	mammary gland		
Hs 618.T	CRL-7380*	human	lung; adenocarcinoma		
Hs 62.Fs	CRL-7042*	human	skin (foreskin)	fibroblast	adherent
Hs 621.Sk	CRL-7383*	human	skin	fibroblast	adherent
Hs 622.Sk	CRL-7385*	human	skin (scalp)	fibroblast	adherent
Hs 63.T	CRL-7043*	human	skin; dermatofibrosarcoma protuberans	fibroblast	adherent
Hs 67	HTB-163	human	thymus	fibroblast	adherent
Hs 67.Th	CRL-7828*	human	thymus	fibroblast	adherent
Hs 674.Sk	CRL-7397*	human	skin	fibroblast	adherent
Hs 675.T	CRL-7400*	human	colon; colorectal cancer	fibroblast	adherent
Hs 677.Sk	CRL-7406*	human	skin	fibroblast	adherent
Hs 677.Tg	CRL-7408*	human	tongue	fibroblast	adherent
Hs 680.Rec	CRL-7418*	human	rectum, fetal		adherent
Hs 680.Sk	CRL-7419*	human	skin	fibroblast	adherent
Hs 680.Tg	CRL-7421*	human	tongue	fibroblast	adherent
Hs 680.Tr	CRL-7422*	human	trachea	fibroblast	adherent
Hs 683	HTB-138	human	brain; glioma	fibroblast	adherent
Hs 687.Sk	CRL-7424*	human	skin	fibroblast	adherent
Hs 688(A).T	CRL-7425*	human	skin; melanoma	fibroblast	adherent
Hs 688(B).T	CRL-7426*	human	inguinal lymph node (metastasis); melanoma (skin primary)	fibroblast	adherent
Hs 69.Fs	CRL-7047*	human	skin (foreskin)	fibroblast	adherent
Hs 692(A).T	CRL-7428*	human	lymph node (metastasis); intestinal carcinoma (unknown primary)		adherent
Hs 695.Sk	CRL-7855*	human	skin	fibroblast	adherent
Hs 695T	HTB-137	human	lymph node (metastasis); amelanotic melanoma (skin primary)	epithelial	adherent
Hs 696	HTB-151	human	bone (metastasis); adenocarcinoma (unknown primary)	epithelial	adherent
Hs 696.Sk	CRL-7431*	human	skin	fibroblast	adherent
Hs 697.Ln	CRL-7434*	human	lymph node; noncaseating granuloma	fibroblast	adherent
Hs 697.Sp	CRL-7433*	human	spleen	fibroblast	adherent
Hs 698.T	CRL-7435*	human	connective tissue (metastasis); adenocarcinoma (colon primary)		adherent
Hs 70.Fs	CRL-7048*	human	skin (foreskin)	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 700.Sk	CRL-7439*	human	skin	fibroblast	adherent
Hs 700T	HTB-147	human	bone, pelvis (metastasis); adenocarcinoma (intestines or pancreas primary)	epithelial	adherent
Hs 701.T	CRL-7440*	human	connective tissue; synovial sarcoma	fibroblast	adherent
Hs 704.Sk	CRL-7443*	human	skin	fibroblast	adherent
Hs 704.T	CRL-7444*	human	bone; osteosarcoma	fibroblast	adherent
Hs 706.Sk	CRL-7446*	human	skin	fibroblast	adherent
Hs 706.T	CRL-7447*	human	bone; giant cell sarcoma	fibroblast	adherent
Hs 707(A).T	CRL-7448*	human	bone; osteosarcoma	fibroblast	adherent
Hs 707(B).Ep	CRL-7449*	human	skin (epidermis)	fibroblast	adherent
Hs 709.Sk	CRL-7452*	human	skin	fibroblast	adherent
Hs 709.T	CRL-7453*	human	bone; periostitis; granuloma		
Hs 72.Fs	CRL-7049*	human	skin (foreskin)	fibroblast	adherent
Hs 722.T	CRL-7456*	human	rectum; colorectal carcinoma	fibroblast	adherent
Hs 726.Pl	CRL-7460*	human	placenta	fibroblast	adherent
Hs 728.Sk/Mu	CRL-7462*	human	mixed skin and muscle	fibroblast	adherent
Hs 728.Sp	CRL-7463*	human	spleen	fibroblast	adherent
Hs 729	HTB-153	human	muscle; rhabdomyosarcoma	fibroblast	adherent
Hs 729.T	CRL-7862*	human	connective tissue; rhabdomyosarcoma	fibroblast	adherent
Hs 730.Pl	CRL-7464*	human	placenta	fibroblast	adherent
Hs 731.Sk	CRL-7465*	human	skin	fibroblast	adherent
Hs 733.Sk	CRL-7469*	human	skin	fibroblast	adherent
Hs 734.Sk	CRL-7470*	human	skin	fibroblast	adherent
Hs 735.T	CRL-7471*	human	bone; osteosarcoma	fibroblast	adherent
Hs 737.T	CRL-7473*	human	bone; giant cell sarcoma	fibroblast	adherent
Hs 738.Lu	CRL-7868*	human	lung	fibroblast	adherent
Hs 738.St/Int	CRL-7869*	human	mixed stomach and intestine	fibroblast	adherent
Hs 739.Sk	CRL-7476*	human	skin	fibroblast	adherent
Hs 739.T	CRL-7477*	human	mammary gland; adenocarcinoma	mixed	adherent
Hs 740.Sk	CRL-7478*	human	skin	fibroblast	adherent
Hs 740.T	CRL-7870*	human	stomach; carcinoma	mixed	adherent
Hs 741.Sk	CRL-7479*	human	skin	fibroblast	adherent
Hs 741.T	CRL-7480*	human	mammary gland; adenocarcinoma	mixed	adherent
Hs 742.Sk	CRL-7481*	human	skin	fibroblast	adherent
Hs 742.T	CRL-7482*	human	mammary gland; scirrhous adenocarcinoma	fibroblast	adherent
Hs 746T	HTB-135	human	muscle (metastasis); gastric carcinoma (stomach primary	epithelial	adherent
Hs 748.T	CRL-7486*	human	mammary gland; cancer	mixed	adherent
Hs 749.Sk	CRL-7487*	human	skin	fibroblast	adherent
Hs 751.T	CRL-7488*	human	lymph node; lymphoma; Hodgkin's disease	fibroblast	adherent
Hs 755(B).T	CRL-7489*	human	bone; osteosarcoma	mixed	adherent
Hs 757.T	CRL-7490*	human	lymph node; benign hyperplasia		adherent
Hs 762.Sk	CRL-7492*	human	connective tissue	mixed	adherent
Hs 764.Mu	CRL-7494*	human	connective tissue	fibroblast	adherent
Hs 766T	HTB-134	human	lymph node (metastasis); carcinoma (pancreas primary)	epithelial	adherent
Hs 769.T	CRL-7882*	human	urethra; transitional cell carcinoma	mixed	adherent
Hs 77.Fs	CRL-7055*	human	skin (foreskin)	fibroblast	adherent
Hs 774.Pl	CRL-7502*	human	placenta	mixed	adherent
Hs 777.T	CRL-7507*	human	lymph node; lymphoma	mixed	mixed
Hs 778(A).T	CRL-7508*	human	connective tissue; fibrosarcoma	fibroblast	adherent
Hs 778(B).T	CRL-7509*	human	connective tissue; fibrosarcoma	epithelial	adherent
Hs 781.Sk	CRL-7510*	human	skin	fibroblast	adherent
Hs 781.T	CRL-7511*	human	bone; osteosarcoma	mixed	adherent
Hs 782.Sk	CRL-7513*	human	skin	fibroblast	adherent
Hs 782.T	CRL-7512*	human	connective tissue; benign histiocytic lesion	mixed	adherent
Hs 788.Sk	CRL-7516*	human	skin	fibroblast	adherent
Hs 789.Sk	CRL-7518*	human	skin	fibroblast	adherent
Hs 789.T	CRL-7886*	human	ureter; transitional cell carcinoma	epithelial	adherent
Hs 791.Sk	CRL-7519*	human	skin	fibroblast	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 792(A).T	CRL-7520*	human	cervical lymph node (metastasis); osteosarcoma (bone primary)	mixed	adherent
Hs 792(B).T	CRL-7521*	human	bone; osteosarcoma	fibroblast	adherent
Hs 792(C).M	CRL-7522*	human	muscle; connective and soft tissue	fibroblast	adherent
Hs 793.Sk	CRL-7523*	human	skin	fibroblast	adherent
Hs 793.T	CRL-7524*	human	mesenteric lymph node; hyperplasia	mixed	adherent
Hs 795.Pl	CRL-7526*	human	placenta	fibroblast	adherent
Hs 798.Pl	CRL-7529*	human	placenta	fibroblast	adherent
Hs 799.Pl	CRL-7530*	human	placenta	fibroblast	adherent
Hs 80.Fs	CRL-7058*	human	skin (foreskin)	fibroblast	adherent
Hs 801.Pl	CRL-7888*	human	placenta	fibroblast	adherent
Hs 803.Sk	CRL-7533*	human	skin	fibroblast	adherent
Hs 803.T	CRL-7534*	human	skin	fibroblast	adherent
Hs 805.T	CRL-7537*	human	bone; osteosarcoma	fibroblast	adherent
Hs 811.T	CRL-7543*	human	bone; osteosarcoma	epithelial	adherent
Hs 813.Sk	CRL-7545*	human	skin	fibroblast	adherent
Hs 814.Sk	CRL-7546*	human	skin	fibroblast	adherent
Hs 814.T	CRL-7547*	human	vertebral column; giant cell sarcoma	mixed	adherent
Hs 815.Pl	CRL-7548*	human	placenta	fibroblast	adherent
Hs 819.T	CRL-7891*	human	bone; chondrosarcoma	fibroblast	adherent
Hs 820.Sk	CRL-7551*	human	skin	fibroblast	adherent
Hs 820.T	CRL-7552*	human	bone; heterophilic osteofication	fibroblast	adherent
Hs 821.Sk	CRL-7553*	human	skin	fibroblast	adherent
Hs 821.T	CRL-7554*	human	bone; giant cell sarcoma	fibroblast	adherent
Hs 822.T	CRL-7556*	human	bone; Ewing's sarcoma	epithelial	adherent
Hs 824.Sk	CRL-7558*	human	skin	fibroblast	adherent
Hs 828.Sk	CRL-7564*	human	skin	mixed	adherent
Hs 832(C).T	CRL-7566*	human	ovary; endometriosis; abnormal	mixed	adherent
Hs 833(C).Sk	CRL-7567*	human	skin	mixed	adherent
Hs 834.T	CRL-7568*	human	lymph node, neck (metastasis); melanoma (skin primary)	fibroblast	adherent
Hs 835.T	CRL-7569*	human; mouse	kidney; cancer	mixed	adherent
Hs 836.Sk	CRL-7570*	human	skin	fibroblast	adherent
Hs 839.T	CRL-7572*	human	skin; melanoma	fibroblast	adherent
Hs 840.T	CRL-7573*	human	pharynx; papilloma	fibroblast	adherent
Hs 841.T	CRL-7574*	human	mammary gland; cancer	mixed	adherent
Hs 844.Sk	CRL-7576*	human	skin	fibroblast	adherent
Hs 845.T	CRL-7577*	human	bone (metastasis); osteosarcoma (femur primary)	fibroblast	adherent
Hs 846.Sk	CRL-7578*	human	skin	fibroblast	adherent
Hs 846.T	CRL-7579*	human	bone; giant cell sarcoma		adherent
Hs 849.T	CRL-7583*	human	mammary gland; cancer	fibroblast	adherent
Hs 851.T	CRL-7584*	human	mammary gland; cancer		adherent
Hs 852.T	CRL-7585*	human	skin; melanoma	epithelial	adherent
Hs 854.Sk	CRL-7589*	human	skin	fibroblast	adherent
Hs 855.Sk	CRL-7591*	human	skin	fibroblast	adherent
Hs 855.T	CRL-7592*	human	bone; mesenchyme; fibrous dysplasia		adherent
Hs 856.T	CRL-7593*	human	connective tissue; histiocytoma	mixed	adherent
Hs 859.T	CRL-7594*	human	skin; acanthocytosis		adherent
Hs 86.Fs	CRL-7059*	human	skin (foreskin)	fibroblast	adherent
Hs 860.T	CRL-7595*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 861.T	CRL-7596*	human	mammary gland; cancer	fibroblast	adherent
Hs 863.T	CRL-7598*	human	bone; Ewing's sarcoma	fibroblast	adherent
Hs 864.Sk	CRL-7599*	human	skin (scalp)	fibroblast	adherent
Hs 864.T	CRL-7600*	human	bone, connective tissue; osteosarcoma	fibroblast	adherent
Hs 865.Sk	CRL-7601*	human	skin	fibroblast	adherent
Hs 866.T	CRL-7602*	human	bone; osteosarcoma	fibroblast	adherent
Hs 867.Sk	CRL-7603*	human	skin	fibroblast	adherent
Hs 868.T	CRL-7604*	human	unknown; fibrosarcoma	fibroblast	adherent
Hs 870.T	CRL-7606*	human	bone; osteosarcoma	fibroblast	adherent
Hs 871.Sk	CRL-7608*	human	skin	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 871.T	CRL-7609*	human	bone; osteosarcoma	fibroblast	adherent
Hs 873.T	CRL-7610*	human	mammary gland, abnormal	fibroblast	adherent
Hs 874.T	CRL-7611*	human	mammary gland, abnormal	fibroblast	adherent
Hs 875.T	CRL-7612*	human	mammary gland, abnormal	fibroblast	adherent
Hs 877.T	CRL-7613*	human	mammary gland, abnormal	fibroblast	adherent
Hs 879(B).T	CRL-7615*	human	mammary gland		
Hs 88.T	CRL-7060*	human	bone, connective tissue; osteosarcoma	fibroblast	adherent
Hs 880.T	CRL-7616*	human	mammary gland, abnormal	fibroblast	adherent
Hs 883.T	CRL-7617*	human	bone; giant cell sarcoma	fibroblast	adherent
Hs 885.T	CRL-7618*	human	mammary gland, abnormal	fibroblast	adherent
Hs 888.Lu	CRL-7624*	human	lung	fibroblast	adherent
Hs 888.Sk	CRL-7623*	human	skin	fibroblast	adherent
Hs 888.T	CRL-7622*	human	lung (metastasis); osteosarcoma (bone primary)	mixed	adherent
Hs 889.Sk	CRL-7625*	human	skin	fibroblast	adherent
Hs 889.T	CRL-7626*	human	bone; osteosarcoma	mixed	adherent
Hs 890.Sk	CRL-7627*	human	skin	fibroblast	adherent
Hs 890.T	CRL-7628*	human	bone; osteosarcoma	mixed	adherent
Hs 891.T	CRL-7629*	human	lymph node (metastasis); carcinoma (kidney primary)	fibroblast	adherent
Hs 892.T	CRL-7630*	human	skin; keratoacanthoma	mixed	adherent
Hs 894(A).T	CRL-7631*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 894(B).T	CRL-7632*	human	lung (metastasis); osteosarcoma (bone primary)	mixed	adherent
Hs 894(C).T	CRL-7633*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 894(D).T	CRL-7634*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 894(E).Lu	CRL-7635*	human	lung	mixed	adherent
Hs 895.Sk	CRL-7636*	human	skin	fibroblast	adherent
Hs 895.T	CRL-7637*	human	lung (metastasis); melanoma (skin primary)	fibroblast	adherent
Hs 898.Sk	CRL-7640*	human	skin	fibroblast	adherent
Hs 898.T	CRL-7641*	human	skin; malignant acanthocytosis; keratoacanthoma	fibroblast	adherent
Hs 899(A).T	CRL-7642*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 899(B).T	CRL-7643*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent

ATCC Cell Biology Trivia #7

When were animal cells first maintained in culture?

Wilhelm Roux first maintained animal cells in culture in 1885. In the early 20th century, the work of Ross Granville Harrison helped cell culture become an essential laboratory technique.

Hs 899(C).T	CRL-7644*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 899(D).Lu	CRL-7645*	human	lung (metastasis); osteosarcoma (bone primary)	fibroblast	adherent
Hs 900.T	CRL-7646*	human	bone; benign osteoid osteoma	mixed	adherent
Hs 903.Sk	CRL-7648*	human	skin	fibroblast	adherent
Hs 903.T	CRL-7649*	human	bone; benign osteoid osteoma	epithelial	adherent
Hs 904.Sk	CRL-7650*	human	skin	fibroblast	adherent
Hs 904.T	CRL-7651*	human	omentum (metastasis); carcinoma (unknown primary)	fibroblast	adherent
Hs 905.T	CRL-7652*	human	mammary gland; cancer	epithelial	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Hs 906(A).T	CRL-7653*	human	skin; melanoma	mixed	adherent
Hs 906(B).T	CRL-7654*	human	skin; melanoma	mixed	adherent
Hs 907.Lu	CRL-7657*	human	lung	fibroblast	adherent
Hs 908.Sk	CRL-7658*	human	skin; melanoma	fibroblast	adherent
Hs 910.Sk	CRL-7894*	human	skin	fibroblast	adherent
Hs 910.Thm	CRL-7660*	human	thymus	mixed	adherent
Hs 912.T	CRL-7661*	human	mammary gland, abnormal	mixed	adherent
Hs 913(B).T	CRL-7664*	human	lung or bronchus (metastasis); fibrosarcoma (connective tissue primary)	fibroblast	adherent
Hs 913(C).T	CRL-7665*	human	lung or bronchus (metastasis); fibrosarcoma (connective tissue primary)		
Hs 913(D).T	CRL-7666*	human	lung or bronchus (metastasis); fibrosarcoma (unknown primary)		adherent
Hs 913(F).T	CRL-7668*	human	lung or bronchus (metastasis); fibrosarcoma (unknown primary)	epithelial	adherent
Hs 913T	HTB-152	human	lung (metastasis); fibrosarcoma (unknown (unknown primary)	fibroblast	adherent
Hs 914	CRL-7895*	human	unknown		
Hs 915	CRL-7896*	human	unknown		
Hs 916	CRL-7897*	human	unknown		
Hs 917.T	CRL-7669*	human	parotid salivary gland; benign sebaceous cyst	fibroblast	adherent
Hs 919.Sk	CRL-7671*	human	skin		adherent
Hs 919.T	CRL-7672*	human	bone; benign osteoid osteoma		adherent
Hs 924.Sk	CRL-7674*	human	skin	fibroblast	adherent
Hs 925.Sk	CRL-7676*	human	skin	fibroblast	adherent
Hs 925.T	CRL-7677*	human	skin; pagetoid sarcoma	fibroblast	adherent
Hs 926.T	CRL-7678*	human	kidney; renal rhabdomyosarcoma	epithelial	adherent
Hs 929.Sk	CRL-7681*	human	skin	mixed	adherent
Hs 93.T	CRL-7062*	human	mixed connective and soft tissue; fibrosarcoma	fibroblast	adherent
Hs 933.T	CRL-7683*	human	lymph node; Wiskott-Aldrich syndrome	fibroblast	adherent
Hs 934.T	CRL-7684*	human	connective tissue; malignant melanoma		
Hs 935.T	CRL-7685*	human	connective tissue; malignant melanoma	fibroblast	adherent
Hs 936.T	CRL-7686*	human	skin; melanoma	epithelial	adherent
Hs 936.T(C1)	CRL-7687*	human	skin; melanoma	epithelial	adherent
Hs 938.T	CRL-7688*	human	mammary gland, abnormal	fibroblast	adherent
Hs 939.T	CRL-7690*	human	skin; melanoma	epithelial	adherent
Hs 94.T	CRL-7064*	human	skeletal muscle; rhabdomyosarcoma	fibroblast	adherent
Hs 940.T	CRL-7691*	human	skin; malignant melanoma	fibroblast	adherent
Hs 941.T	CRL-7692*	human	skin; dermatofibrosarcoma	fibroblast	adherent
Hs 944.T	CRL-7693*	human	lymph node (metastasis); melanoma (skin primary)	fibroblast	adherent
Hs 97.Fs	CRL-7065*	human	skin (foreskin)	fibroblast	adherent
HS-21 (subclone 1H3)	HB-255	mouse/mouse	hybridoma	lymphoblast	suspension
Hs27	CRL-1634	human	skin (foreskin)	fibroblast	adherent
HS-27A	CRL-2496†	human	bone marrow; stroma	epithelial	adherent
HS-5	CRL-11882†	human	bone marrow; stroma; HPV-16 E6/E7 transformed	fibroblast	adherent
Hs68	CRL-1635	human	skin (foreskin); aspartoacylase deficiency; possible Canavan disease	fibroblast	adherent
Hs888Lu	CCL-211	human	lung	fibroblast	adherent
$HSDM_1C_1$	CCL-148	mouse	connective tissue; fibrosarcoma	fibroblast	adherent
HS-Sultan	CRL-1484	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
HT	CRL-2260	human	ascites; diffuse mixed lymphoma; B lymphoblast	lymphoblast	suspension
HT 1417	CRL-7797*	human	unknown; lymphoma	lymphoblast	suspension
HT 29/26	HB-8247†	mouse/mouse	hybridoma	lymphoblast	suspension
HT 29/36	HB-8248†	mouse/mouse	hybridoma	lymphoblast	suspension
HT 297.T	CRL-7782*	human	skin; actinic keratosis	epithelial	adherent
HT 728.T	CRL-7783*	human	bone; osteosarcoma	fibroblast	adherent
HT 762.T	CRL-7789*	human	breast (nipple); cancer		
HT 768.M	CRL-7790*	human	connective tissue; abnormal	fibroblast	adherent
HT-1080	CCL-121	human	connective tissue; fibrosarcoma	epithelial	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
HT-1197	CRL-1473	human	urinary bladder; carcinoma		adherent
HT-1376	CRL-1472	human	urinary bladder; carcinoma	epithelial	adherent
HT-144	HTB-63	human	skin; malignant melanoma	fibroblast	adherent
HT-2 clone A5E	CRL-1841	mouse	spleen; T lymphocyte	lymphoblast	suspension
HT-29	HTB-38	human	colon; colorectal adenocarcinoma	epithelial	adherent
HT-3	HTB-32	human	lymph node (metastasis); carcinoma (cervix primary)	epithelial	adherent
hTERT-HME1	CRL-4010	human	mammary gland; TERT immortalized	epithelial	adherent
hTERT RPE-1	CRL-4000	human	eye, retina; pigmented epithelium; immortalized with hTERT	epithelial	adherent
HTZ17BE	CRL-1361	human	skin; xeroderma pigmentosum, presumed heterozygote	fibroblast	adherent
huFasM3	HB-11726†	mouse/mouse	hybridoma	lymphoblast	suspension
huFasM38	HB-11465†	mouse/mouse	hybridoma	lymphoblast	suspension
HuNS1	CRL-8644†	human	hybridoma fusion partner	lymphoblast	suspension
HuT 102	TIB-162	human	T lymphocyte, cutaneous; lymphoma; mycosis fungoides	lymphoblast	suspension
HuT 78	TIB-161	human	T lymphocyte, cutaneous; lymphoma	lymphoblast	suspension
HuTu 80	HTB-40	human	duodenum; adenocarcinoma	epithelial	adherent
HUVE-12	CRL-2480	human	umbilical vein	endothelial	adherent
HUV-EC-C	CRL-1730	human	umbilical vein, vascular endothelium	endothelial	adherent
HUVS-112D	CRL-2481	human	umbilical vein, smooth muscle	fibroblast	adherent
HX	CRL-12011†	human	fibrosarcoma; transfected; xenotropic retroviral packaging cell line	epithelial	adherent
HY3-11.27	HB-8116†	mouse/mouse	hybridoma	lymphoblast	suspension
Hybridoma 231	HB-9401†	mouse/mouse	hybridoma	lymphoblast	suspension
Hybridoma 234 s.2a	HB-9402†	mouse/mouse	hybridoma	lymphoblast	suspension
Hybridoma 234 s.2a	HB-9403†	mouse/mouse	hybridoma	lymphoblast	suspension
I 2.1	CRL-2572	human	T lymphocyte; FADD mutant; Fas-mediated apoptosis model	lymphoblast	suspension
I 9.2	CRL-2571	human	T lymphocyte; caspase-8 mutant; Fas-mediated apoptosis model	lymphoblast	suspension
I(TL.m9)	HB-131	mouse/mouse	hybridoma	lymphoblast	suspension
I/24.D6	HB-251	rat/mouse	hybridoma	lymphoblast	suspension
I-10	CCL-83	mouse	testis; Leydig cell tumor	epithelial	adherent
I-11.15	CRL-2470	mouse	spleen, macrophage	macrophage	adherent
I-13.35	CRL-2471	mouse	spleen, macrophage	macrophage	adherent
I1-Hybridoma	CRL-2700	mouse/mouse	hybridoma	lymphoblast	suspension
IA-XsSBR	CRL-1677	rat	small intestine; adenocarcinoma	epithelial	adherent
IB3-1	CRL-2777	human	bronchus; cystic fibrosis; immortalized with Ad12-SV40 hybrid	epithelial	adherent
IB4	HB-10164†	mouse/mouse	hybridoma	lymphoblast	suspension
IC-21	TIB-186	mouse	peritoneal macrophage		adherent
ICR 134	CCL-128	frog, grass	embryo; gynogenetic haploid	epithelial	adherent
ICR-2A	CCL-145	frog, grass	embryo; androgenetic haploid	fibroblast	adherent
ICR MEF	SCRC-1046	mouse	embryonic fibroblast; feeder layer	fibroblast	adherent
IE-10	CRL-2462	rat/mouse	hybridoma	lymphoblast	suspension
IE-3	CRL-2463	rat/mouse	hybridoma	lymphoblast	suspension
IEC-18	CRL-1589	rat	ileum	epithelial	adherent
IEC-6	CRL-1592	rat	small intestine; epithelium	epithelial	adherent
IFGCP-F1BA10	HB-8291†	mouse/mouse	hybridoma	lymphoblast	suspension
Ig(1a)8.3	TIB-148	mouse/mouse	hybridoma	lymphoblast	suspension
Ig(4a)10.9	HB-146	mouse/mouse	hybridoma	lymphoblast	suspension
Ig(5a)7.2	TIB-149	mouse/mouse	hybridoma	lymphoblast	suspension
Ig(5b)6.3	TIB-96	mouse/mouse	hybridoma	lymphoblast	suspension
IGEL a2	TIB-142	mouse/mouse	hybridoma	lymphoblast	suspension
IGEL b4	TIB-141	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-11H4	CRL-1936	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-11H9	CRL-2213	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-1B3	CRL-1937	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-1C6	CRL-2224	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
IgG-1D2	CRL-2545	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-2A4	CRL-2121	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-2F1	CRL-2419	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-3B2	CRL-2693	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-4A4	CRL-1898	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-5D7	CRL-1938	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-6A6	CRL-2197	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-7D4	CRL-2198	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-9D5	CRL-2347	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-B16	CRL-1899	mouse/mouse	hybridoma	lymphoblast	suspension
IgG-IB7	CRL-2418	mouse/mouse	hybridoma	lymphoblast	suspension
IgH-2	CCL-108	iguana	heart	epithelial	adherent
IL-A11	CRL-1879	mouse/mouse	hybridoma	lymphoblast	suspension
IL-A29	CRL-1874	mouse/mouse	hybridoma	lymphoblast	suspension
IL-A30	CRL-1894	mouse/mouse	hybridoma	lymphoblast	suspension
IL-A42	CRL-1870	mouse/mouse	hybridoma	lymphoblast	suspension
IL-A51	CRL-1871	mouse/mouse	hybridoma	lymphoblast	suspension
ILB1-H21	HB-10220†	mouse/mouse	hybridoma	lymphoblast	suspension
ILB1-H34	HB-10221†	mouse/mouse	hybridoma	lymphoblast	suspension
ILB1-H6	HB-10219†	mouse/mouse	hybridoma	lymphoblast	suspension
ILB1-H67	HB-10222†	mouse/mouse	hybridoma	lymphoblast	suspension
IM7.8.1	TIB-235	rat/mouse	hybridoma	lymphoblast	suspension
IM-9	CCL-159	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
IMM002.69.47.4	CRL-13007†	mouse/mouse	B lymphoblast; antibody reactive with cell surface membranes of cancer cells	lymphoblast	suspension
IMR-32	CCL-127	human	brain, neuroblast; neuroblastoma	fibroblast	adherent
IMR-33	CCL-146	gerbil, Mongolian	connective tissue; fibroma	fibroblast	adherent
IMR-90	CCL-186	human	lung	fibroblast	adherent
Indian Muntjac	CCL-157	muntjac	skin	fibroblast	adherent
intestine 407	CCL-6	human	HeLa contaminant	epithelial	adherent
IP-1B	CRL-2162	mouse	axillary lymph node, vascular epithelium; SV40 transformed	epithelial	adherent
IP2-E4	CRL-2171	mouse	axillary lymph node, vascular epithelium; SV40 transformed	epithelial	adherent
IV.3	HB-217	mouse/mouse	hybridoma	lymphoblast	suspension
IVA12	HB-145	mouse/mouse	hybridoma	lymphoblast	suspension
IVD12	HB-144	mouse/mouse	hybridoma	lymphoblast	suspension
IZD-MB-0503	CRL-8003†	moth, cabbage	larva		loosely adherent
J.CaM1.6	CRL-2063	human	T lymphocyte; acute T cell leukemia	lymphoblast	suspension
J.γ1	CRL-2678	human	T lymphocyte; PLC-gamma1 negative; model for T-cell receptor signaling	lymphoblast	clusters in suspension
J.γ1.WT	CRL-2679	human	T lymphocyte; transfected with PLC-gamma1 expression vector; control for J.γ1 cells	lymphoblast	clusters in suspension
J.RT3-T3.5	TIB-153	human	T lymphocyte; acute T cell leukemia	lymphoblast	suspension
J1	SCRC-1010	mouse	embryonic stem cell; derived from 129 substrain	spherical colony	adherent
J11d.2	TIB-183	rat/mouse	hybridoma	lymphoblast	suspension
J1-31	CRL-2253	mouse/mouse	hybridoma	lymphoblast	suspension
J1j.10	TIB-184	rat/mouse	hybridoma	lymphoblast	suspension
J26	CRL-1802	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
J27-B7	CRL-2374	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
J27-neo	CRL-2372	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
J45.01	CRL-1990	human	T lymphocyte; acute T cell leukemia; CD45 deficient	lymphoblast	suspension
J5-1	HB-8297†	mouse/mouse	hybridoma	lymphoblast	suspension
J5-2	HB-8298†	mouse/mouse	hybridoma	lymphoblast	suspension
J558	TIB-6	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
J774A.1	TIB-67	mouse	macrophage; monocyte; reticulum cell sarcoma	macrophage	adherent
J82	HTB-1	human	urinary bladder; transitional cell carcinoma	epithelial	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Ja Bos	CRL-1176	human	skin; Ehlers-Danlos syndrome, type II (hemorrhagic type)	fibroblast	adherent
Ja Coo	CRL-1294	human	skin; osteogenesis imperfecta (tarda)	fibroblast	adherent
JAA-F11	CRL-2381	mouse/mouse	hybridoma	lymphoblast	suspension
JAR	HTB-144	human	placenta; choriocarcinoma	epithelial	adherent
JAWSII	CRL-11904†	mouse	bone marrow; immature dendritic cell	monocyte	mixed
Jay Sen	CRL-1215	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
JB6 Cl 30-7b	CRL-2007	mouse	skin (epidermis); chemically transformed	epithelial	adherent
JB6 Cl 41-5a	CRL-2010	mouse	skin (epidermis); chemically transformed	epithelial	adherent
JC	CRL-2116	mouse	mammary gland; adenocarcinoma	epithelial	adherent
JEG-3	HTB-36	human	placenta; choriocarcinoma	epithelial	adherent
Jensen Sarcoma	CCL-45	rat	sarcoma	fibroblast	adherent
JES3-19F1.1.1	HB-10487†	rat/mouse	hybridoma	lymphoblast	suspension
JH4 clone 1	CCL-158	guinea pig	lung	fibroblast	adherent
Jiyoye	CCL-87	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
JLS-V5	CRL-6359*	mouse	mixed spleen and thymus	fibroblast	adherent
JLS-V9	CRL-6360*	mouse	mixed spleen and thymus		adherent
JM1	CRL-10423†	human	pre-B lymphoblast; leukemia; lymphoma	lymphoblast	suspension
Jo Per	CRL-1332	human	skin; Ehlers-Danlos syndrome, possible heterozygote	fibroblast	adherent
JO1-1	HB-8638†	mouse/mouse	hybridoma	lymphoblast	suspension
JSC-1	CRL-2769	human	peritoneal effusion; B cell lymphoma (metastatic site: peritoneal cavity)	lymphoblast	suspension
Jurkat, Clone E6-1	TIB-152	human	T lymphocyte; acute T cell leukemia	lymphoblast	suspension
K 114	HB-8444†	mouse/mouse	hybridoma	lymphoblast	suspension
K:Molv NIH/3T3	CRL-6361*	mouse	embryo		adherent
K117	HB-8553†	mouse/mouse	hybridoma	lymphoblast	suspension
K204	HB-221	rat/rat	hybridoma	lymphoblast	suspension
K-562	CCL-243	human	pleural effusion (metastatic); chronic myelogenous leukemia (bone marrow primary)	lymphoblast	suspension
K66	HB-8767†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
K6H6/B5	CRL-1823	human/mouse	hybridoma fusion partner	lymphoblast	suspension
Kasumi-1	CRL-2724	human	peripheral blood; acute myeloblastic leukemia	myeloblast	suspension
Kasumi-3	CRL-2725	human	peripheral blood; acute myeloblastic leukemia	myeloblast	suspension
Kasumi-4	CRL-2726	human	peripheral blood; chronic myeloblastic leukemia	myeloblast	suspension
Kasumi-6	CRL-2775	human	peripheral blood; acute myeloid leukemia, subtype M2	myeloblast	suspension
KATO III	HTB-103	human	pleural effusion (metastasis); gastric carcinoma (stomach primary)	spherical	suspension
KB	CCL-17	human	HeLa contaminant	epithelial	adherent
K-BALB (K-234)	CCL-163.3	mouse	embryo	fibroblast	adherent
KC-4G3	HB-8709†	mouse/mouse	hybridoma	lymphoblast	suspension
KC-4M1	HB-8710†	mouse/mouse	hybridoma	lymphoblast	suspension
KEL FIB	CRL-1762	human	skin; connective tissue; keloid	fibroblast	adherent
KG-1	CCL-246	human	bone marrow; myeloblast; acute lymphoblastic leukemia	myeloblast	suspension
KG-1	CRL-8031†	human	bone marrow; myeloblast; acute lymphoblastic leukemia	lymphoblast	suspension
KG-1a	CCL-246.1	human	bone marrow;promyeloblast; acute lymphoblastic leukemia	myeloblast	suspension
KHOS/NP (R-970-5)	CRL-1544	human	bone; osteosarcoma		adherent
KHOS-240S	CRL-1545	human	bone; osteosarcoma	fibroblast	adherent
KHOS-321H	CRL-1546	human	bone; osteosarcoma		adherent
KL277	CRL-2030	hamster/mouse	hybridoma	lymphoblast	suspension
KL295	CRL-1996	mouse/mouse	hybridoma	lymphoblast	suspension
KL304	CRL-2027	mouse/mouse	hybridoma	lymphoblast	suspension
KLE	CRL-1622	human	uterus (endometrium); adenocarcinoma		adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
KLN 205	CRL-1453	mouse	lung; squamous cell carcinoma		adherent
KM114	TIB-242	rat/mouse	hybridoma	lymphoblast	suspension
KM201	TIB-240	rat/mouse	hybridoma	lymphoblast	suspension
KM703	CRL-1896	rat/mouse	hybridoma	lymphoblast	suspension
KM81	TIB-241	rat/mouse	hybridoma	lymphoblast	suspension
KMA	CRL-9856†	human	spleen; macrophage; monocyte	monocyte/ macrophage	clusters in suspension
KMC8.8	CRL-2212	rat/mouse	hybridoma	lymphoblast	suspension
KMI6	CRL-2179	rat/mouse	hybridoma	lymphoblast	suspension
KNRK	CRL-1569	rat	kidney		mixed
KR-12	CRL-8658†	human	hybridoma fusion partner	lymphoblast	suspension
KU812	CRL-2099	human	peripheral blood, basophil; chronic myelogenous leukemia	myeloblast	suspension
KU812E	CRL-2100	human	peripheral blood, basophil; chronic myelogenous leukemia	myeloblast	suspension
KU812F	CRL-2101	human	peripheral blood, basophil; chronic myelogenous leukemia	myeloblast	suspension
L Cells	CRL-2648	mouse	subcutaneous connective tissue, areolar and adipose; control for L Wnt-3A cells	fibroblast	adherent
L Wnt-3A	CRL-2647	mouse	subcutaneous connective tissue, areolar and adipose; souce of Wnt-3A conditioned medium	fibroblast	adherent
L.N. 4159	CRL-10998†	mouse	liver	epithelial	adherent
L101	HB-8447†	mouse/mouse	hybridoma	lymphoblast	suspension
L11/135	TIB-188	mouse/mouse	hybridoma	lymphoblast	suspension
L1210	CCL-219	mouse	lymphocytic leukemia	lymphoblast	suspension
L-132	CCL-5	human	HeLa contaminant	epithelial	adherent
L-14	HB-8554†	mouse/mouse	hybridoma	lymphoblast	suspension

ATCC Cell Biology Trivia #8

Who coined the word "cell"?

Robert Hooke was a theoretician in physics, an architect, and an inventor. But he is best known for coining the word "cell" in 1665 from microscopic observations of cork bark, which reminded him of monks' cells.

L18	HB-8628†	mouse/mouse	hybridoma	lymphoblast	suspension
L2	CCL-149	rat	lung	epithelial	adherent
L-2/M Δ 2-3	CRL-10191†	*Drosophila*	embryo; overproduces P element transposase	epithelial	mixed
L203	HB-171	mouse/mouse	hybridoma	lymphoblast	suspension
L227	HB-96	mouse/mouse	hybridoma	lymphoblast	suspension
L230	HB-8448†	mouse/mouse	hybridoma	lymphoblast	suspension
L235	HB-8446†	mouse/mouse	hybridoma	lymphoblast	suspension
L243	HB-55	mouse/mouse	hybridoma	lymphoblast	suspension
L2I-6	HB-8705†	mouse/mouse	hybridoma	lymphoblast	suspension
L2-RYC	CRL-2180	rat	embryo; yolk sac; carcinoma	epithelial	adherent
L368	HB-149	mouse/mouse	hybridoma	lymphoblast	suspension
L368	HB-8450†	mouse/mouse	hybridoma	lymphoblast	suspension
L5	HB-8627†	mouse/mouse	hybridoma	lymphoblast	suspension
L5.1	HB-84	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
L5178-R (LY-R)	CRL-1722	mouse	thymus; lymphoma	lymphoblast	suspension
L5178-S (LY-S)	CRL-1723	mouse	thymus; lymphoma	lymphoblast	suspension
L5178Y TK+/– (clone 3.7.2C)	CRL-9518†	mouse	lymphoma	lymphoblast	suspension
L6	CRL-1458	rat	skeletal muscle	myoblast	adherent
L612	CRL-10724†	human	lymph node; B lymphoblast; EBV transformed	lymphoblast	suspension
L8	CRL-1769	rat	skeletal muscle	fibroblast	adherent
LA 3-5	CRL-10101†	hamster, Chinese	ovary; methotrexate resistant	epithelial	adherent
La Bel	CRL-1179	human	skin; Ehlers-Danlos syndrome, type VI (hemorrhagic type)	fibroblast	adherent
La Bel II	CRL-1195	human	skin; Ehlers-Danlos syndrome, type VI (hemorrhagic type)	fibroblast	adherent
La1	HB-8609†	mouse/mouse	hybridoma	lymphoblast	suspension
LA-4	CCL-196	mouse	lung; adenoma	epithelial	adherent
LA7	CRL-2283	rat	mammary gland tumor; feeder layer cell	epithelial	adherent
LADMAC	CRL-2420	mouse	bone marrow	lymphoblast	mixed
L-alpha-1a L-cells	CRL-11138†	mouse	subcutaneous connective tissue; areolar and adipose	fibroblast	adherent
L-α-1b	CRL-11139†	mouse	subcutaneous connective tissue; expresses human adrenergic alpha 1B receptor	fibroblast	adherent
L-alpha-2A L-cells	CRL-11180†	mouse	subcutaneous connective tissue; areolar and adipose	fibroblast	adherent
L-alpha-2C L-cells	CRL-11181†	mouse	subcutaneous connective tissue; areolar and adipose	fibroblast	adherent
L-NGC-alpha2B L-cells	CRL-10275†	mouse	subcutaneous connective tissue; areolar and adipose	fibroblast	adherent
LB 27.4	HB-99	mouse/mouse	hybridoma	lymphoblast	suspension
LB10.Bm	CRL-6060*	bovine	bone marrow; lymphosarcoma		
LB10.K	CRL-6061*	bovine	kidney		
LB10.Ln	CRL-6062*	bovine	lymph node		
LB10.Sp	CRL-6063*	bovine	spleen; lymphosarcoma		
LB10.Thy	CRL-6064*	bovine	thymus; lymphosarcoma		
LB11.Ln	CRL-6066*	bovine	lymph node		
LB11.Sp	CRL-6067*	bovine	spleen; lymphosarcoma		
LB11.Thy	CRL-6068*	bovine	thymus; lymphosarcoma		
LB3.1	HB-298	mouse/mouse	hybridoma	lymphoblast	suspension
LB9.Bm	CRL-6053*	bovine	bone marrow; lymphosarcoma		adherent
LB9.D	CRL-6054*	bovine	skin (dermis)		
LB9.Ln	CRL-6057*	bovine	lymph node		
LB9.Sp	CRL-6058*	bovine	spleen; lymphosarcoma		
LB9.Sp/Thy/Bm	CRL-6052*	bovine	mixed: spleen, thymus, and bone marrow; lymphosarcoma		
LB9.Thy	CRL-6059*	bovine	thymus; lymphosarcoma		
LBLN	CRL-6046*	bovine	lymph node		
LBRM TG6	CRL-1778	mouse	T lymphocyte; radiation-induced lymphoma	lymphoblast	suspension
LBRM-33 clone 4A2	TIB-155	mouse	T lymphocyte; radiation-induced lymphoma	lymphoblast	mixed
LBRM-33-1A5	CRL-8079†	mouse	spleen; lymphoma	lymphoblast	suspension
LC-540	CCL-43	rat	testis; Leydig cell tumor	epithelial	adherent
LCL 8664	CRL-1805	monkey, Rhesus	B lymphocyte; lymphoma	lymphoblast	suspension
Le Ana	CRL-1192	human	skin; Marfan syndrome	fibroblast	adherent
Lec1	CRL-1735	hamster, Chinese	ovary; lacks GlcNAc glycosyl transferase function	epithelial	adherent
Lec2	CRL-1736	hamster, Chinese	ovary; reduced transport of CMP-sialic acid into Golgi compartment	epithelial	adherent
Lec8	CRL-1737	hamster, Chinese	ovary; reduced transport of UDP-galactose into Golgi compartment	epithelial	adherent
Lei Cap	CRL-1098	human	skin; Darier-White disease	fibroblast	adherent
LFC16.Ln	CRL-6173*	cat	lymph node	fibroblast	adherent
LHR-1055	CRL-2687	mouse/mouse	hybridoma	lymphoblast	suspension
LHR-29	CRL-2685	mouse/mouse	hybridoma	lymphoblast	suspension
LHR-74	CRL-2686	mouse/mouse	hybridoma	lymphoblast	suspension
LI 27	HB-8437†	mouse/mouse	hybridoma	lymphoblast	mixed

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
LI 66	HB-8442†	mouse/mouse	hybridoma	lymphoblast	suspension
LK 35.2	HB-98	mouse/mouse	hybridoma	lymphoblast	suspension
LK-4	CRL-2345	mouse/mouse	hybridoma	lymphoblast	suspension
LL 24	CCL-151	human	lung	fibroblast	adherent
LL 29 (AnHa)	CCL-134	human	lung; idiopathic pulmonary fibrosis	fibroblast	adherent
LL 47 (MaDo)	CCL-135	human	lung	fibroblast	adherent
LL 86 (LeSa)	CCL-190	human	lung	fibroblast	adherent
LL 97A (AlMy)	CCL-191	human	lung; idiopathic pulmonary fibrosis	fibroblast	adherent
LL/2 (LLC1)	CRL-1642	mouse	lung; Lewis lung carcinoma		mixed
LLC-MK_2	CCL-7	monkey, Rhesus	kidney	epithelial	adherent
LLC-MK_2	CCL-7.1	monkey, Rhesus	kidney	epithelial	adherent
LLC-PK_1	CL-101	pig	kidney	epithelial	adherent
LLC-PK_{1A}	CL-101.1	pig	kidney		adherent
LLC-RK_1	CCL-106	rabbit	kidney	epithelial	adherent
LLC-WRC 256	CCL-38	rat	carcinoma	epithelial	adherent
L-M	CCL-1.2	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
L-M(TK^-)	CCL-1.3	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
LM2/1.6.11	HB-204	mouse/mouse	hybridoma	lymphoblast	suspension
LMH	CRL-2117	chicken	liver; hepatocellular carcinoma	epithelial	adherent
LMH/2A	CRL-2118	chicken	liver; hepatocellular carcinoma	epithelial	adherent
LN-18	CRL-2610	human	brain; glioblastoma; apoptosis studies; p53+, p16–, p14ARF–	epithelial	adherent
LN-229	CRL-2611	human	brain; glioblastoma; apoptosis studies; p53+, p16–, p14ARF–	epithelial	adherent
LNCaP clone FGC	CRL-1740	human	lymph node (metastasis); carcinoma (prostate primary)	epithelial	loosely adherent clusters
L-NGC-5HT2	CRL-10287†	mouse	subcutaneous connective tissue; expresses human 5HT2 receptor	fibroblast	adherent
LNZTA3WT11	CRL-11544†	human	brain; glioblastoma; p53 expression under tetracycline-induced promoter	glial	adherent
LNZTA3WT4	CRL-11543†	human	brain; glioblastoma; p53 expression under tetracycline-induced promoter	glial	adherent
Lo Ren	CRL-1130	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
Lo Wen	CRL-1159	human	skin; xeroderma pigmentosum, presumed heterozygote	fibroblast	adherent
LO-22	HB-8619†	mouse/mouse	hybridoma	lymphoblast	suspension
Loucy	CRL-2629	human	peripheral blood; T lymphocyte; acute lymphoblastic leukemia; t(16;20) translocation	lymphoblast	suspension
LoVo	CCL-229	human	lymph node, left supraclavicular region (metastasis); colorectal adenocarcinoma (colon primary)	epithelial	adherent
Lp1 MAB 1	CRL-1765	mouse/mouse	hybridoma	lymphoblast	suspension
Lp1 MAB 2	CRL-1770	mouse/mouse	hybridoma	lymphoblast	suspension
Lp1 MAB 3	CRL-1767	mouse/mouse	hybridoma	lymphoblast	suspension
LP3IIG2	HB-8472†	mouse/mouse	hybridoma	lymphoblast	suspension
LP4.4	HB-232	mouse/mouse	hybridoma	lymphoblast	suspension
LS 102.9	HB-97	mouse/mouse	hybridoma	lymphoblast	suspension
LS 174T	CL-188	human	colon; colorectal adenocarcinoma	epithelial	adherent
LS-125-2D4-11-10-1	HB-12644†	mouse/mouse	hybridoma	lymphoblast	suspension
LS129-3C3-E3-1	HB-12653†	mouse/mouse	hybridoma	lymphoblast	suspenson
LS132.1D9	HB-12549†	mouse/mouse	hybridoma		suspension
LS132.8G2	HB-12550†	mouse/mouse	hybridoma	lymphoblast	suspension
LS 180	CL-187	human	colon; colorectal adenocarcinoma	epithelial	adherent
LS1034	CRL-2158	human	cecum; colorectal carcinoma	epithelial	adherent
LS123	CCL-255	human	colon; colorectal adenocarcinoma	epithelial	adherent
LS-136	TIB-157	mouse/mouse	hybridoma	lymphoblast	suspension
LS3-10	CRL-7720*	human	bone marrow; aplastic anemia		
LS411N	CRL-2159	human	cecum; colorectal carcinoma	epithelial	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
LS513	CRL-2134	human	cecum; colorectal carcinoma	epithelial	adherent
Ltk-11	CRL-10422†	mouse	subcutaneous connective tissue; expresses human 5HT1D beta receptor	fibroblast	adherent
LTPA	CRL-2389	mouse	pancreas; adenocarcinoma	epithelial	adherent
LTR228	HB-8502†	human	hybridoma fusion partner	lymphoblast	suspension
Lu Rob	CRL-1397	human	skin; Ehlers-Danlos syndrome, type IV	fibroblast	adherent
Lu Vin	CRL-1144	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
L Wnt-5A	CRL-2814	mouse	subcutaneous connective tissue; areolar and adipose	fibroblast	adherent
LYK-1	HB-306	rat/mouse	hybridoma	lymphoblast	suspension
LYK-12	HB-316	rat/mouse	hybridoma	lymphoblast	suspension
LYK-16	HB-319	rat/mouse	hybridoma	lymphoblast	suspension
LYK-5	HB-310	rat/mouse	hybridoma	lymphoblast	suspension
LYK-7	HB-311	rat/mouse	hybridoma	lymphoblast	suspension
LYK-8	HB-312	rat/mouse	hybridoma	lymphoblast	suspension
LYK-9	HB-313	rat/mouse	hybridoma	lymphoblast	suspension
Lym-1	HB-8612†	mouse/mouse	hybridoma	lymphoblast	suspension
Lym-2	HB-8613†	mouse/mouse	hybridoma	lymphoblast	suspension
M 111	HB-8438†	mouse/mouse	hybridoma	lymphoblast	suspension
M 144	HB-8440†	mouse/mouse	hybridoma	lymphoblast	suspension
M. dunni (Clone III8C)	CRL-2017	mouse	skin	fibroblast	adherent
M/K-1.9	CRL-1910	rat/mouse	hybridoma	lymphoblast	suspension
M/K-2.7	CRL-1909	rat/mouse	hybridoma	lymphoblast	suspension
M059J	CRL-2366	human	brain, glial cell; malignant glioblastoma; glioma	fibroblast	adherent
M059K	CRL-2365	human	brain, glial cell; malignant glioblastoma; glioma	fibroblast	adherent
M1	TIB-192	mouse	myeloblast; myeloid leukemia		suspension
M-1	CRL-2038	mouse (transgenic)	kidney (cortex), collecting duct	epithelial	adherent
M1.4	CRL-2464	rat/mouse	hybridoma	lymphoblast	suspension
M1/22.25.8.HL	TIB-121	rat/mouse	hybridoma	lymphoblast	suspension
M1/42.3.9.8.HLK	TIB-126	rat/mouse	hybridoma	lymphoblast	suspension
M1/69.16.11.HL	TIB-125	rat/mouse	hybridoma	lymphoblast	suspension
M1/70.15.11.5.HL	TIB-128	rat/mouse	hybridoma	lymphoblast	suspension
M1/75.16.4.HLK	TIB-127	rat/mouse	hybridoma	lymphoblast	suspension
M1/87.27.7.HLK	TIB-123	rat/mouse	hybridoma	lymphoblast	suspension
M1/89.18.7.HK	TIB-124	rat/mouse	hybridoma	lymphoblast	suspension
M1/9.3.4.HL.2	TIB-122	rat/mouse	hybridoma	lymphoblast	suspension
M17/4.4.11.9	TIB-217	rat/mouse	hybridoma	lymphoblast	suspension
M17/5.2	TIB-237	rat/mouse	hybridoma	lymphoblast	suspension
M18/2.a.12.7	TIB-218	rat/mouse	hybridoma	lymphoblast	suspension
M195	HB-10306†	mouse/mouse	hybridoma	lymphoblast	suspension
M1WT2	CRL-1984	hamster, Chinese	ovary; expresses rat m1 muscarinic acetylcholine receptor	epithelial	adherent
M1WT3	CRL-1985	hamster, Chinese	ovary; expresses rat m1 muscarinic acetylcholine receptor	epithelial	adherent
M1WT5	CRL-1986	hamster, Chinese	ovary; expresses rat m1 muscarinic acetylcholine receptor	epithelial	adherent
M2-10B4	CRL-1972	mouse	bone marrow, stroma	fibroblast	adherent
M2-1C6-4R3	HB-64	mouse/mouse	hybridoma	lymphoblast	suspension
M-24 (M138)	HB-8449†	mouse/mouse	hybridoma	lymphoblast	suspension
M-2E6	HB-138	mouse/mouse	hybridoma	lymphoblast	suspension
M3/38.1.2.8 HL.2	TIB-166	rat/mouse	hybridoma	lymphoblast	suspension
M3/84.6.34	TIB-168	rat/mouse	hybridoma	lymphoblast	suspension
M3WT4	CRL-1981	hamster, Chinese	ovary; expresses rat m3 muscarinic acetylcholine receptor	epithelial	adherent
M3WT5	CRL-1982	hamster, Chinese	ovary; expresses rat m3 muscarinic acetylcholine receptor	epithelial	adherent
M3WT8	CRL-1983	hamster, Chinese	ovary; expresses rat m3 muscarinic acetylcholine receptor	epithelial	adherent
M5/114.15.2	TIB-120	rat/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
M5/49.4.1	TIB-238	rat/mouse	hybridoma	lymphoblast	suspension
M-7	CRL-2804	mouse	fibrosarcoma	fibroblast	adherent
Ma San	CRL-1148	human	skin; Ehlers-Danlos syndrome, type VII (arthrochalasia type)	fibroblast	adherent
MA-104 Clone 1	CRL-2378.1	monkey, African green	kidney	epithelial	adherent
MA1-6	CRL-1783	mouse/mouse	hybridoma	lymphoblast	suspension
MA2.1	HB-54	mouse/mouse	hybridoma	lymphoblast	suspension
Mab 108	HB-9764†	mouse/mouse	hybridoma	lymphoblast	suspension
Mab 126	HB-8568†	mouse/mouse	hybridoma	lymphoblast	suspension
mAb 13-1	HB-10565†	mouse/mouse	hybridoma	lymphoblast	suspension
MAb 151-45-4	HB-12682†	mouse/mouse	hybridoma	lymphoblast	suspension
MAb 1812-4-8	HB-12683†	mouse/mouse	hybridoma	lymphoblast	suspension
Mab 1E8	HB-11490†	mouse/mouse	hybridoma	lymphoblast	suspension
mAB 24-1	HB-11947†	mouse/mouse	hybridoma	lymphoblast	suspension
mAB 24-2	HB-11946†	mouse/mouse	hybridoma	lymphoblast	suspension
MAb 26-7-5	HB-12681†	mouse/mouse	hybridoma	lymphoblast	suspension
mAb 270	HB-189	rat/mouse	hybridoma	lymphoblast	suspension
Mab 2B5	HB-11491†	mouse/mouse	hybridoma	lymphoblast	suspension
mAb 35	HB-8857†	rat/mouse	hybridoma	lymphoblast	suspension
MAb 5.2	HB-9148†	mouse/mouse	hybridoma	lymphoblast	suspension
Mab 543	HB-8592†	mouse/mouse	hybridoma	lymphoblast	suspension
MAb 951-5-1	HB-12684†	mouse/mouse	hybridoma	lymphoblast	suspension
Mab 96	HB-9763†	mouse/mouse	hybridoma	lymphocyte	suspension
mAb BB7	CRL-2501	mouse/mouse	hybridoma	lymphoblast	suspension
MAb104	CRL-2067	mouse/mouse	hybridoma	lymphoblast	suspension
mAb35	TIB-175	rat/mouse	hybridoma	lymphoblast	suspension
mAb64	HB-8987†	rat/rat	hybridoma	lymphoblast	suspension
MAC 2-48	HB-10714†	mouse/mouse	hybridoma	lymphoblast	suspension
Malme-3	HTB-102	human	skin	fibroblast	adherent
Malme-3M	HTB-64	human	skin; malignant melanoma	mixed	adherent
MAR 18.5	TIB-216	mouse/mouse	hybridoma	lymphoblast	suspension
Mar Nol	CRL-1257	human	skin; Marfan syndrome	fibroblast	adherent
Mar Ton	CRL-1252	human	skin; Ehlers-Danlos syndrome	fibroblast	adherent
Mar Vin	CRL-1138	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
MARC 29F8	CRL-2508	mouse/mouse	hybridoma	lymphoblast	suspension
MARC 2B7	CRL-2509	mouse/mouse	hybridoma	lymphoblast	suspension
MARC S5	CRL-2507	mouse/mouse	hybridoma	lymphoblast	suspension
MAT-Lu	JHU-4	rat	prostate; cancer		adherent
MAT-Ly-Lu-B-2	CRL-2376	rat	prostate; malignant carcinoma	epithelial	adherent
May Roy	CRL-1250	human	skin; Marfan syndrome	fibroblast	adherent
MB 157	CRL-7721*	human	pleural effusion (metastasis); carcinoma (mammary gland primary)	epithelial	adherent
MB 40.3	HB-105	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
MB III (de Bruyn-Gey)	CCL-32	mouse	lymphosarcoma	lymphoblast	mixed
MB16tsA, clone 1B5	CRL-2307	mouse	embryo; SV40 large T antigen transfected; control for MmB19tsA. clone 2B2	fibroblast	adherent
MB19tsA, clone 2B2	CRL-2308	mouse	embryo; SV40 large T antigen transfected; Cre-lox recombination model	fibroblast	adherent
MB23G2	HB-220	rat/mouse	hybridoma	lymphoblast	suspension
MB352	CRL-2821	mouse	embryo, fibroblast; spontaneously immortalized	fibroblast	adherent
MB355	CRL-2818	mouse	embryo, fibroblast; immortalized SV40 large T antigen	fibroblast	adherent
MB40.2	HB-59	mouse/mouse	hybridoma	lymphoblast	suspension
MB40.5	HB-116	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
MB4B4	HB-223	rat/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
MBA C57.We	CRL-6370*	mouse	whole fetus		
MBC(5)	CRL-6069*	bovine	unknown		
MBL-Sm-1A6	HB-194	mouse/mouse	hybridoma	lymphoblast	suspension
MBL-Sm-4B1	HB-193	mouse/mouse	hybridoma	lymphoblast	suspension
MC/9	CRL-8306†	mouse	liver, mast cell	lymphoblast	suspension
MC/CAR	CRL-8083†	human	hybridoma fusion partner	lymphoblast	suspension
MC/CAR-Z2	CRL-8147†	human	hybridoma fusion partner	lymphoblast	suspension
MC116	CRL-1649	human	ascites, B lymphoblast; undifferentiated lymphoma	lymphoblast	suspension
MC17-51	CRL-2799	mouse	fibrosarcoma	fibroblast	adherent
MC2/3	CRL-2143	hamster, Chinese	somatic cell hybrid; mouse chromosome 8	fibroblast	adherent
MC3T3-E1 Subclone 14	CRL-2594	mouse	bone (calvaria); osteoblast differentiation model	fibroblast	adherent
MC3T3-E1 Subclone 24	CRL-2595	mouse	bone (calvaria); osteoblast differentiation model	fibroblast	adherent
MC3T3-E1 Subclone 30	CRL-2596	mouse	bone (calvaria); osteoblast differentiation model	fibroblast	adherent
MC3T3-E1 Subclone 4	CRL-2593	mouse	bone (calvaria); osteoblast differentiation model	fibroblast	adherent
MC57G	CRL-2295	mouse	methylcholanthrene-induced fibrosarcoma		adherent
McA-RH7777	CRL-1601	rat	liver; hepatoma; Morris hepatoma 7777	epithelial	adherent
McA-RH8994	CRL-1602	rat	liver; hepatoma; Morris hepatoma 8994	epithelial	adherent
MCB3901	CRL-9595†	hamster, Syrian golden	tumor, adenovirus-12 induced; transfection host; exogenous gene expression	fibroblast	adherent
McCoy	CRL-1696	mouse	unknown	fibroblast	adherent
MCF 10A	CRL-10317†	human	mammary gland; fibrocystic disease	epithelial	adherent
MCF 10F	CRL-10318†	human	mammary gland; fibrocystic disease	epithelial	adherent
MCF-10-2A	CRL-10781†	human	mammary gland; fibrocystic disease	epithelial	adherent

ATCC Cell Biology Trivia #9

What is the origin of the HeLa cell line?

Cervical cancer cells from a woman named Henrietta Lacks became the first immortalized cell line and a critical tool in cell research. The cells proved to grow almost too well as HeLa cells are a frequent intraspecies contaminant in human cell cultures.

MCF-12A	CRL-10782†	human	mammary gland	epithelial	adherent
MCF-12F	CRL-10783†	human	mammary gland	epithelial	adherent
MCF7	HTB-22	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	epithelial	adherent
MC-IXC	CRL-2270	human	supraorbital area (metastasis); neuroepithelioma (brain primary)	fibroblast	adherent
MCL-5	CRL-10575†	human	peripheral blood, B lymphocyte; EBNA positive	lymphoblast	suspension
MC-SV-HUC T-2	CRL-9519†	human	ureter (uroepithelium)	epithelial	adherent
MD	CRL-9850†	human	spleen; macrophage; monocyte	monocyte/ macrophage	suspension
MD2	HB-229	rat/mouse	hybridoma	lymphoblast	suspension
MDA PCa 2b	CRL-2422	human	bone (metastasis); adenocarcinoma (prostate primary)	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
MDA-kb2	CRL-2713	human	mammary gland; luciferase resposive; androgen agonist/antagonist	epithelial	adherent
MDA-MB-134-VI	HTB-23	human	pleural effusion (metastasis); ductal carcinoma (mammary gland primary)	epithelial	loosely adherent
MDA-MB-157	HTB-24	human	pleural effusion (metastasis); carcinoma (mammary gland primary)	epithelial	adherent
MDA-MB-175-VII	HTB-25	human	pleural effusion (metastasis); ductal carcinoma (mammary gland primary)	epithelial	loosely adherent
MDA-MB-231	HTB-26	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	epithelial	adherent
MDA-MB-330	HTB-127	human	pleural effusion (metastasis); carcinoma (mammary gland primary)	epithelial	adherent
MDA-MB-361	HTB-27	human	brain (metastasis); adenocarcinoma (mammary gland primary)	epithelial	loosely adherent
MDA-MB-415	HTB-128	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	epithelial	adherent
MDA-MB-435S	HTB-129	human	pleural effusion; ductal carcinoma (mammary gland primary)	spindle shaped	adherent
MDA-MB-436	HTB-130	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	pleomorphic with multinucleated component cells	adherent
MDA-MB-453	HTB-131	human	pleural effusion (metastasis); carcinoma (mammary gland primary)	epithelial	adherent
MDA-MB-468	HTB-132	human	pleural effusion (metastasis); adenocarcinoma (mammary gland primary)	epithelial	adherent
MDBK (NBL-1)	CCL-22	bovine	kidney	epithelial	adherent
MDCK (NBL-2)	CCL-34	dog	kidney	epithelial	adherent
MDOK	CRL-1633	sheep	kidney	epithelial	adherent
MDTC-RP19	CRL-8135†	turkey	lymph node; Marek's disease	lymphoblast	suspension
ME	CRL-6371*	mouse	embryo		
ME 1	HB-119	mouse/mouse	hybridoma	lymphoblast	suspension
Me Jon	CRL-1288	human	skin; osteogenesis imperfecta (congenita)	fibroblast	adherent
Me Mon	CRL-1342	human	skin; Ehlers-Danlos syndrome, variant type	fibroblast	adherent
ME-180	HTB-33	human	omentum (metastasis); epidermoid carcinoma (cervix primary)	epithelial	adherent
ME195	HB-8431†	mouse/mouse	hybridoma	lymphoblast	suspension
ME361S2a	HB-9326†	mouse/mouse	hybridoma	lymphoblast	suspension
MECA-367	HB-9478†	rat/mouse	hybridoma	lymphoblast	suspension
MECA-79	HB-9479†	rat/mouse	hybridoma	lymphoblast	suspension
MECA-89	HB-292	rat/mouse	hybridoma	lymphoblast	suspension
MEF (C57BL/6)	SCRC-1008	mouse	embryonic fibroblast; feeder layer	fibroblast	adherent
MEF (CF-1)	SCRC-1040	mouse	embryonic fibroblast; feeder layer	fibroblast	adherent
MEF-1	CRL-2214	mouse	embryo; SV40 transformed	fibroblast	adherent
MEG-01	CRL-2021	human	bone marrow; megakaryoblast; chronic myelogenous leukemia	lymphoblast	mixed
Mel Neg	CRL-1193	human	skin; Ehlers-Danlos syndrome, type VII (arthrochalasia type)	fibroblast	adherent
MEL-14	HB-132	rat/mouse	hybridoma	lymphoblast	suspension
MES-SA	CRL-1976	human	uterus; uterine sarcoma	fibroblast	adherent
MES-SA/Dx5	CRL-1977	human	uterus; uterine sarcoma	fibroblast	adherent
MES-SA/MX2	CRL-2274	human	uterus; uterine sarcoma	fibroblast	adherent
MeT-5A	CRL-9444†	human	mesothelium; virus transformed	epithelial	adherent
MeWo	HTB-65	human	lymph node (metastasis); malignant melanoma (skin primary)	fibroblast	adherent
MF 116	HB-8411†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
MG38	CRL-2640	mouse/mouse	hybridoma	lymphoblast	suspension
MG-63	CRL-1427	human	bone; osteosarcoma	fibroblast	adherent
mh	CRL-2709	mouse	muscle; Hermansky-Pudlak syndrome	fibroblast	adherent
MH1	HB-9739†	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
MH_1C_1	CCL-144	rat	liver; hepatoma	epithelial	adherent
MH55	HB-8412†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
MH-S	CRL-2019	mouse	lung	macrophage	mixed
MH-SVM23	HB-8870†	mouse/mouse	hybridoma	lymphoblast	suspension
MH-SVM25	HB-8871†	mouse/mouse	hybridoma	lymphoblast	suspension
MH-SVM26	HB-8872†	mouse/mouse	hybridoma	lymphoblast	suspension
MH-SVM33C9	HB-8975†	mouse/mouse	hybridoma	lymphoblast	suspension
MIA PaCa-2	CRL-1420	human	pancreas; carcinoma	epithelial	adherent
MiCl1 (S^+L^-)	CCL-64.1	mink	lung	fibroblast	adherent
MiF-6	CRL-2802	mouse	fibrosarcoma	fibroblast	adherent
mIMCD-3	CRL-2123	mouse (transgenic)	kidney (medulla, collecting duct)	epithelial	adherent
MJ	CRL-8294†	human	peripheral blood, T lymphocyte; cutaneous T cell lymphoma; mycosis fungoides	lymphoblast	suspension
MK-D6	HB-3	mouse/mouse	hybridoma	lymphoblast	suspension
MK-S4	HB-4	mouse/mouse	hybridoma	lymphoblast	suspension
MLE 12	CRL-2110	mouse (transgenic)	lung	epithelial	adherent
MLg	CCL-206	mouse	lung	fibroblast	adherent
MLH1	CRL-1766	mouse/mouse	hybridoma	lymphoblast	suspension
MLH2	CRL-1779	mouse/mouse	hybridoma	lymphoblast	suspension
MLTC-1	CRL-2065	mouse	testis; Leydig cell tumor	epithelial	adherent
MM14.Lu	CRL-6382*	mouse	lung or bronchus		adherent
MM14.OT	CRL-6384*	mouse	unknown; cancer	epithelial	adherent
MM14.Ov	CRL-6383*	mouse	ovary	epithelial	adherent
MM15.Sp/Thy	CRL-6388*	mouse	mixed spleen and thymus		adherent
MM15OT	CRL-6438*	mouse	unknown; cancer		
MM16.Ov	CRL-6390*	mouse	ovary	epithelial	adherent
MM19.Lu	CRL-6396*	mouse	lung		
MM22.We	CRL-6400*	mouse	embryo		
MM23.We	CRL-6401*	mouse	embryo		
MM27.We	CRL-6402*	mouse	embryo		
MM29.We	CRL-6403*	mouse	embryo		
MM2MT	CRL-6373*	mouse	mammary gland; cancer	epithelial	adherent
MM2MTC	CRL-6374*	mouse	mammary gland; cancer	epithelial	adherent
MM2SCT	CRL-6375*	mouse	mammary gland; cancer	epithelial	adherent
MM31.We	CRL-6405*	mouse	embryo		
MM34.We	CRL-6408*	mouse	embryo		
MM36T(C)	CRL-6411*	mouse	connective tissue; cancer		
MM36We	CRL-6413*	mouse	embryo		
MM37T	CRL-6414*	mouse	connective tissue; cancer		
MM3MG	CRL-6376*	mouse	mammary gland	epithelial	adherent
MM4.We	CRL-6377*	mouse	embryo, pooled		
MM41We	CRL-6416*	mouse	embryo		
MM43T	CRL-6418*	mouse	unknown; cancer		
MM44.Sp	CRL-6419*	mouse	spleen		
MM45T.Bl	CRL-6420*	mouse	fibrosarcoma; bladder (adjacent)	mixed	adherent
MM45T.Li	CRL-6421*	mouse	fibrosarcoma; liver (adjacent)	mixed	adherent
MM45T.Sp	CRL-6422*	mouse	spleen; fibrosarcoma	mixed	adherent
MM46T	CRL-6423*	mouse	fibrosarcoma		
MM47T	CRL-6424*	mouse	connective tissue; fibrosarcoma		
MM48T	CRL-6425*	mouse	fibrosarcoma		
MM49T	CRL-6426*	mouse	fibrosarcoma		
MM5.1	CRL-6380*	mouse	mammary gland; cancer	epithelial	adherent
MM5/C1	CRL-6444*	mouse	mammary gland; cancer	epithelial	adherent
MM51.Sp	CRL-6427*	mouse	spleen	epithelial	adherent
MM52.Sp	CRL-6428*	mouse	spleen; fibrosarcoma	epithelial	adherent
MM52.T	CRL-6429*	mouse	fibrosarcoma	epithelial	adherent
MM53.Sp	CRL-6430*	mouse	spleen; fibrosarcoma	epithelial	adherent
MM54.K	CRL-6433*	mouse	kidney		
MM54.Sp/Thy	CRL-6434*	mouse	mixed spleen and thymus		
MM55.K	CRL-6436*	mouse	kidney	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
MM55.Sp/Thy	CRL-6437*	mouse	mixed spleen and thymus	mixed	adherent
Mm5MT	CRL-1637	mouse	mammary gland	epithelial	adherent
MM5MT	CRL-6590*	mouse	mammary gland; cancer	epithelial	adherent
MM5MTC	CRL-6378*	mouse	mammary gland; cancer	epithelial	adherent
MM5MTM	CRL-6379*	mouse	mammary gland; cancer	epithelial	adherent
MM7-11.Sp	CRL-6381*	mouse	spleen; tumor		
MMA	HB-78	mouse/mouse	hybridoma	lymphoblast	suspension
MMQ	CRL-10609†	rat	pituitary tumor	epithelial	suspension
M-MSV-BALB/3T3	CCL-163.2	mouse	embryo	fibroblast	adherent
MMT 060562	CCL-51	mouse	mammary gland tumor	epithelial	adherent
MN-11	CRL-2800	mouse	fibrosarcoma	fibroblast	adherent
M-NFS-60	CRL-1838	mouse	peripheral blood; virus-induced myeloid leukemia	lymphoblast	suspension
MNNG/HOS (Cl #5)	CRL-1547	human	bone; osteosarcoma		adherent
Mo	CRL-8066†	human	T lymphocyte; hairy cell leukemia	lymphoblast	suspension
Mo-B	CCL-245	human	peripheral blood, B lymphoblast; hairy cell leukemia	lymphoblast	suspension
MOLT-3	CRL-1552	human	peripheral blood, T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
MOLT-4	CRL-1582	human	T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
MOP-8	CRL-1709	mouse	embryo	fibroblast	adherent
MOPC 315	TIB-23	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
MOPC-31C	CCL-130	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
Mouse	CRL-6440*	mouse	unknown		
MPC 11 OUA^r	TIB-15	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
MPC-11	CCL-167	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
Mpf	CRL-1656	ferret	brain		adherent
MPK	CCL-166	minipig	kidney	fibroblast	adherent
MPRO Cell Line, Clone 2.1	CRL-11422†	mouse	bone marrow; neutrophil progenitor cell line		suspension
MR1	CRL-2580	hamster/mouse	hybridoma	lymphoblast	suspension
MRC-5	CCL-171	human	lung	fibroblast	adherent
MRC-9	CCL-212	human	lung	fibroblast	adherent
MRSS-1 (D_2D_4)	HB-69	mouse/mouse	hybridoma	lymphoblast	suspension
MS1	CRL-2279	mouse	pancreas (islet of Langerhans), endothelium		adherent
MS1 VEGF	CRL-2460	mouse	pancreas (islet of Langerhans), endothelium	endothelial	adherent
MS751	HTB-34	human	lymph node (metastasis); epidermoid carcinoma (cervix primary)	epithelial	adherent
MSTO-211H	CRL-2081	human	pleural effusion (metastasis); mesothelioma, biphasic (lung primary)	fibroblast	adherent
mSXL 104	CRL-1953	mouse/mouse	hybridoma	lymphoblast	suspension
mSXL 114	CRL-1954	mouse/mouse	hybridoma	lymphoblast	suspension
mSXL 18	CRL-1952	mouse/mouse	hybridoma	lymphoblast	suspension
mSXL 5	CRL-1951	mouse/mouse	hybridoma	lymphoblast	suspension
MT1.K	CRL-6309*	talapoin	unknown, possibly kidney		
MT-6	CRL-2805	mouse	fibrosarcoma	fibroblast	adherent
MTC-M	CRL-1806	mouse	thyroid; medulla; C cell; carcinoma	epithelial	suspension
MTKP 97-12	CRL-8985†	mouse	subcutaneous connective tissue; produces p97 melanoma-associated antigen	fibroblast	adherent
MU14.K	CRL-6485*	parakeet, shell	kidney		
Murphy	CRL-7722*	human	bone; osteosarcoma		
Mv 1 Lu (NBL-7)	CCL-64	mink	lung	epithelial	adherent
MV-4-11	CRL-9591†	human	peripheral blood; biphenotypic B myelomonocytic leukemia	lymphoblast	suspension
Mvi/It	CRL-6012*	bat, mouse-eared	interscapular tumor, possibly basal cell		adherent
MX	HB-9158†	mouse/mouse	hybridoma	lymphoblast	suspension
My 43.51	HB-12128†	mouse/mouse	hybridoma	lymphoblast	suspension
MY904	HB-9510†	mouse/mouse	hybridoma	lymphoblast	suspension
MYA-1	CRL-2417	cat	peripheral blood, T lymphoblast	lymphoblast	suspension
MYB 2-3.76	CRL-1728	mouse/mouse	hybridoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
MYB 2-37.63	CRL-1726	mouse/mouse	hybridoma	lymphoblast	suspension
MYB 2-7.77	CRL-1724	mouse/mouse	hybridoma	lymphoblast	suspension
MYC 1-9E10.2	CRL-1729	mouse/mouse	hybridoma	lymphoblast	suspension
MYC CT 14-G4.3	CRL-1727	mouse/mouse	hybridoma	lymphoblast	suspension
MYC CT 9-B7.3	CRL-1725	mouse/mouse	hybridoma	lymphoblast	suspension
N1.551	CRL-2040	mouse/mouse	hybridoma	lymphoblast	suspension
N1E-115	CRL-2263	mouse	brain, neuroblast; neuroblastoma	fibroblast	adherent
N1-S1	CRL-1604	rat	liver; hepatoma; Novikoff hepatoma		suspension
N1-S1 Fudr	CRL-1603	rat	liver; hepatoma; Novikoff hepatoma		suspension
N2.261	CRL-2047	mouse/mouse	hybridoma	lymphoblast	suspension
N22	HB-225	hamster/mouse	hybridoma	lymphoblast	suspension
N3.36	CRL-2042	mouse/mouse	hybridoma	lymphoblast	suspension
N418	HB-224	hamster/mouse	hybridoma	lymphoblast	suspension
NAMALWA	CRL-1432	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
NB3	HB-10205	mouse/mouse	hybridoma	lymphoblast	suspension
NB41A3	CCL-147	mouse	brain, neuroblast; neuroblastoma	neuroblast	adherent
NBT-II	CRL-1655	rat	urinary bladder; tumor	epithelial	adherent
NC-37	CCL-214	human	peripheral blood, B lymphoblast; Burkitt's lymphoma	lymphoblast	suspension
NCCIT	CRL-2073	human	embryonal carcinoma; teratocarcinoma; nullipotent	epithelial	adherent
NCE-F161	CRL-8727†	cat	embryo	lymphoblast	adherent
NCI-BL1184	CRL-5949	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL128	CRL-5947	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1339	CRL-5950	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1395	CRL-5957	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1437	CRL-5958	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1450	CRL-5951	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1514	CRL-5952	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1607	CRL-5953	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1672	CRL-5959	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL1770	CRL-5960	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2009	CRL-5961	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2028	CRL-5962	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2052	CRL-5963	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2087	CRL-5965	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL209	CRL-5948	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2107	CRL-5966	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2122	CRL-5967	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2126	CCL-256.1	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2141	CRL-5955	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
NCI-BL2171	CRL-5969	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2195	CRL-5956	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-BL2347	CRL-5970	human	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	suspension
NCI-H1048	CRL-5853	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H1092	CRL-5855	human	bone marrow (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H1105	CRL-5856	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H1155	CRL-5818	human	lymph node (metastasis); large cell neuro-endocrine carcinoma (lung primary)	epithelial	clusters in suspension
NCI-H1184	CRL-5858	human	lymph node (metastasis); carcinoma; small cell lung cancer (lung primary)		clusters in suspension
NCI-H1238	CRL-5859	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		mixed
NCI-H128	HTB-120	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)	floating aggregates	clusters in suspension
NCI-H1299	CRL-5803	human	lymph node (metastasis); large cell neuro-endocrine carcinoma (lung primary)	epithelial	adherent
NCI-H1304	CRL-5862	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)		clusters in suspension
NCI-H1341	CRL-5864	human	cervix (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H1355	CRL-5865	human	pleural effusion (metastasis); adenocarcinoma (lung primary)		suspension
NCI-H1373	CRL-5866	human	lung; adenocarcinoma		adherent
NCI-H1385	CRL-5867	human	lymph node (metastasis); squamous cell neuro-endocrine carcinoma (lung primary)		suspension
NCI-H1395	CRL-5868	human	lung; adenocarcinoma		adherent
NCI-H1404	CRL-5819	human	lymph node (metastasis); papillary adenocar-cinoma (lung primary)	epithelial	clusters in suspension
NCI-H1417	CRL-5869	human	lung; carcinoma; classic small cell lung cancer		suspension
NCI-H1435	CRL-5870	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H1436	CRL-5871	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H1437	CRL-5872	human	pleural effusion (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H146	HTB-173	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H1522	CRL-5874	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H1563	CRL-5875	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H1568	CRL-5876	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H1573	CRL-5877	human	soft tissue (metastasis); adenocarcinoma (lung primary)		adherent
NCI-H1581	CRL-5878	human	lung; large cell adenocarcinoma; non-small cell lung cancer		mixed
NCI-H1618	CRL-5879	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H1623	CRL-5881	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H1648	CRL-5882	human	lymph node (metastasis); adenocarcinoma (lung primary)		adherent
NCI-H1650	CRL-5883	human	pleural effusion (metastasis); adenocarcinoma; bronchoalveolar carcinoma (lung primary)		adherent
NCI-H1651	CRL-5884	human	lung; adenocarcinoma; non-small cell lung cancer		adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
NCI-H1666	CRL-5885	human	pleural effusion (metastasis); adenocarcinoma; bronchoalveolar carcinoma (lung primary)		adherent
NCI-H1672	CRL-5886	human	lung; carcinoma; classic small cell lung cancer		suspension
NCI-H1688	CCL-257	human	lung; carcinoma; classic small cell lung cancer	epithelial	adherent
NCI-H1693	CRL-5887	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H1694	CRL-5888	human	ascites (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H1703	CRL-5889	human	lung; squamous cell adenocarcinoma; non-small cell lung cancer		suspension
NCI-H1734	CRL-5891	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H1755	CRL-5892	human	liver (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H1770	CRL-5893	human	lymph node (metastasis); neuroendocrine carcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H1781	CRL-5894	human	pleural effusion (metastasis); adenocarcinoma; bronchoalveolar carcinoma (lung primary)		adherent
NCI-H1792	CRL-5895	human	pleural effusion (metastasis); adenocarcinoma (lung primary)		adherent
NCI-H1793	CRL-5896	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H1819	CRL-5897	human	lymph node (metastasis); adenocarcinoma (lung primary)		suspension
NCI-H1836	CRL-5898	human	lung; carcinoma; classic small cell lung cancer		clusters in suspension
NCI-H1838	CRL-5899	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H1869	CRL-5900	human	pleural effusion (metastasis); squamous cell carcinoma (lung primary)		adherent
NCI-H187	CRL-5804	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H1870	CRL-5901	human	cervix (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H1876	CRL-5902	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		adherent
NCI-H1882	CRL-5903	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H1915	CRL-5904	human	brain (metastasis); large cell carcinoma; poorly differentiated (lung primary)		adherent
NCI-H1926	CRL-5905	human	lymph node (metastasis); carcinoma; small cell lung cancer (lung primary)		clusters in suspension
NCI-H1930	CRL-5906	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		adherent
NCI-H1944	CRL-5907	human	soft tissue (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H196	CRL-5823	human	pleural effusion (metastasis); carcinoma; variant small cell lung cancer (lung primary)		adherent
NCI-H1963	CRL-5982	human	lung; carcinoma; small cell lung cancer		suspension
NCI-H1975	CRL-5908	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H1993	CRL-5909	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H1994	CRL-5910	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H2009	CRL-5911	human	lymph node (metastasis); adenocarcinoma (lung primary)		adherent
NCI-H2023	CRL-5912	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H2029	CRL-5913	human	lymph node (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H2030	CRL-5914	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
NCI-H2052	CRL-5915	human	pleural effusion (metastasis); mesothelioma (pleura primary)		adherent
NCI-H2059	CRL-5916	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H2066	CRL-5917	human	lung, mixed; small cell lung cancer; adenocarcinoma; squamous cell carcinoma		adherent
NCI-H2073	CRL-5918	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H2081	CRL-5920	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H2085	CRL-5921	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H2087	CRL-5922	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		loosely adherent
NCI-H209	HTB-172	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H2106	CRL-5923	human	lymph node (metastasis); large cell neuroendocrine carcinoma (lung primary)		adherent
NCI-H2107	CRL-5983	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H2108	CRL-5984	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		clusters in suspension
NCI-H211	CRL-5824	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H2110	CRL-5924	human	pleural effusion (metastasis); non-small cell lung cancer (lung primary)		adherent
NCI-H2122	CRL-5985	human	pleural effusion (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H2126	CCL-256	human	lung; carcinoma; non-small cell lung cancer	epithelial	adherent
NCI-H2135	CRL-5926	human	lung; non-small cell lung cancer		adherent
NCI-H2141	CRL-5927	human	lymph node (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H2170	CRL-5928	human	lung; squamous cell carcinoma		adherent
NCI-H2171	CRL-5929	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H2172	CRL-5930	human	lung; non-small cell lung cancer		adherent
NCI-H2195	CRL-5931	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H2196	CRL-5932	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H2198	CRL-5933	human	lymph node (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H220	CRL-5825	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)		mixed
NCI-H2227	CRL-5934	human	lung; carcinoma; small cell lung cancer		adherent
NCI-H2228	CRL-5935	human	lung; adenocarcinoma; non-small cell lung cancer		adherent

ATCC Cell Biology Trivia #10

Who discovered DNA and when?

Friedrich Miescher, a Swiss scientist, discovered DNA in 1869 and proposed that it might play a role in heredity. Seventy years later, Oswald Avery's landmark studies with bacteria confirmed Miescher's hunch.

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
NCI-H226	CRL-5826	human	pleural effusion (metastasis); squamous cell carcinoma; mesothelioma (lung primary)		adherent
NCI-H2286	CRL-5938	human	lung, mixed; small cell lung cancer; adeno-carcinoma; squamous cell carcinoma		adherent
NCI-H2291	CRL-5939	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)	epithelial	adherent
NCI-H23	CRL-5800	human	lung; adenocarcinoma; non-small cell lung cancer	epithelial	adherent
NCI-H2330	CRL-5940	human	lymph node (metastasis); carcinoma; small cell lung cancer (lung primary)		adherent
NCI-H2342	CRL-5941	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H2347	CRL-5942	human	lung; adenocarcinoma; non-small cell lung cancer		adherent
NCI-H2405	CRL-5944	human	ascites (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H2444	CRL-5945	human	lung; non-small cell lung cancer	epithelial	adherent
NCI-H2452	CRL-5946	human	pleural effusion; mesothelioma		adherent
NCI-H250	CRL-5828	human	brain (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H28	CRL-5820	human	pleural effusion (metastasis); mesothelioma (pleura primary)		adherent
NCI-H292	CRL-1848	human	lung; mucoepidermoid pulmonary carcinoma	epithelial	adherent
NCI-H295	CRL-10296†	human	adrenal gland; cortex adrenocortical carcinoma	epithelial	mixed
NCI-H295R	CRL-2128	human	adrenal gland (cortex); carcinoma	epithelial	adherent
NCI-H345	HTB-180	human	bone marrow (metastasis); carcinoma; small cell lung cancer (lung primary)	epithelial	mixed suspen-sion
NCI-H358	CRL-5807	human	lung (bronchiole; alveolus); bronchioalveolar carcinoma; non-small cell lung cancer	epithelial	adherent
NCI-H378	CRL-5808	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H441	HTB-174	human	pericardial fluid (metastasis); papillary adeno-carcinoma (lung primary)	epithelial	adherent
NCI-H446	HTB-171	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)	epithelial	mixed
NCI-H460	HTB-177	human	pleural effusion (metastasis); large cell carci-noma (lung primary)	epithelial	adherent
NCI-H498	CCL-254	human	cecum; colorectal adenocarcinoma	epithelial	mixed
NCI-H508	CCL-253	human	cecum; colorectal adenocarcinoma	epithelial	mixed
NCI-H510A	HTB-184	human	adrenal gland (metastasis); carcinoma; small cell lung cancer (unknown primary)	epithelial	mixed
NCI-H520	HTB-182	human	lung; squamous cell carcinoma	epithelial	adherent
NCI-H522	CRL-5810	human	lung; adenocarcinoma; non-small cell lung cancer	epithelial	adherent
NCI-H524	CRL-5831	human	lymph node (metastasis); carcinoma; variant small cell lung cancer (lung primary)		suspension
NCI-H526	CRL-5811	human	bone marrow (metastasis); carcinoma; classic small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H548	CCL-249	human	colon; adenocarcinoma	epithelial	mixed
NCI-H596	HTB-178	human	lung; adenosquamous carcinoma	epithelial	adherent
NCI-H630	CRL-5833	human	liver (metastasis); carcinoma (rectum primary)		adherent
NCI-H647	CRL-5834	human	pleural effusion (metastasis); mixed adeno-squamous and carcinoma (lung primary)		adherent
NCI-H650	CRL-5835	human	lymph node (metastasis); bronchioalveolar carci-noma; non-small cell lung cancer (lung primary)		suspension
NCI-H660	CRL-5813	human	lymph node (metastasis); extrapulmonary small cell carcinoma (prostate primary)	epithelial	clusters in suspension
NCI-H661	HTB-183	human	lymph node (metastasis); carcinoma; large cell lung cancer (lung primary)	epithelial	adherent
NCI-H676B	HTB-179	human	pleural effusion (metastasis); adenocarcinoma (lung primary)	epithelial	mixed suspen-sion
NCI-H69	HTB-119	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)	floating aggregates	clusters in suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
NCI-H711	CRL-5836	human	bone marrow (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H716	CCL-251	human	cecum; colorectal adenocarcinoma	epithelial	mixed
NCI-H719	CRL-5837	human	bone marrow (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H720	CRL-5838	human	lung; atypical carcinoid		suspension
NCI-H727	CRL-5815	human	lung (bronchus); carcinoid	epithelial	adherent
NCI-H735	CRL-5978	human	liver (metastasis); carcinoma; small cell lung cancer (lung primary)		suspension
NCI-H740	CRL-5840	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H747	CCL-252	human	cecum; colorectal adenocarcinoma	epithelial	mixed
NCI-H748	CRL-5841	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H774	CRL-5842	human	soft tissue (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H810	CRL-5816	human	lung; large cell; neuroendocrine; carcinoma; non-small cell lung cancer	epithelial	adherent
NCI-H82	HTB-175	human	pleural effusion (metastasis); carcinoma; small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H820	HTB-181	human	lymph node (metastasis); papillary adenocarcinoma (lung primary)	epithelial	mixed
NCI-H835	CRL-5843	human	lung; carcinoid		suspension
NCI-H838	CRL-5844	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		adherent
NCI-H841	CRL-5845	human	lymph node (metastasis); carcinoma; variant small cell lung cancer (lung primary)		mixed
NCI-H847	CRL-5846	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)		suspension
NCI-H865	CRL-5849	human	pleural effusion (metastasis); carcinoma; classic small cell lung cancer (lung primary)		clusters in suspension
NCI-H889	CRL-5817	human	lymph node (metastasis); carcinoma; classic small cell lung cancer (lung primary)	epithelial	clusters in suspension
NCI-H920	CRL-5850	human	lymph node (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		suspension
NCI-H929	CRL-9068†	human	bone marrow, B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
NCI-H969	CRL-5852	human	pleural effusion (metastasis); adenocarcinoma; non-small cell lung cancer (lung primary)		mixed
NCI-N87	CRL-5822	human	liver (metastasis); gastric carcinoma (stomach primary)	epithelial	adherent
NCTC 3749	CCL-46.1	mouse	monocyte; macrophage; lymphoma	fibroblast	adherent
NCTC 4093	CCL-63	mouse	embryo	fibroblast	adherent
NCTC 4206	CCL-14.2	hamster, Chinese	peritoneum	fibroblast	adherent
NCTC clone 1469	CCL-9.1	mouse	liver	epithelial	adherent
NCTC clone 2472	CCL-11	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
NCTC clone 2555	CCL-12	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
NCTC clone 3526	CCL-7.2	monkey, Rhesus	kidney	epithelial	adherent
NCTC clone 929	CCL-1	mouse	subcutaneous connective tissue (areolar and adipose)	fibroblast	adherent
NE	CRL-2070	mouse	embryonic carcinoma; teratocarcinoma; nullipotent	epithelial	adherent
Ne Loc	CRL-1205	human	skin; stiff skin syndrome	fibroblast	adherent
NEF26.Ov	CRL-6175*	cat	ovary		
NEF36.Sg	CRL-6176*	cat	sublingual salivary gland		
Neuro-2a	CCL-131	mouse	brain, neuroblast; neuroblastoma	neuronal and amoeboid stem cells	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
NF-1	CRL-2075	mouse	embryonic carcinoma; teratocarcinoma; nullipotent	epithelial	adherent
NFPE	CRL-2069	mouse	embryo; embryonic carcinoma	epithelial	adherent
NFS-25 C-3	CRL-1695	mouse	pre-B lymphoblast; lymphoma	lymphoblast	suspension
NFS-5 C-1	CRL-1693	mouse	pre-B lymphoblast; lymphoma	lymphoblast	suspension
NFS-70 C-10	CRL-1694	mouse	pro-B lymphoblast; lymphoma	lymphoblast	suspension
NG108-15	HB-12317†	mouse/rat	brain; glial cell; neuron; glioblastoma; neuroblastoma (hybrid)	flat; round	adherent
NIH/3T3	CRL-1658	mouse	embryo	fibroblast	adherent
NIH:OVCAR-3	HTB-161	human	ascites (metastasis); adenocarcinoma (ovary primary)	epithelial	adherent
NIT-1	CRL-2055	mouse (transgenic)	pancreas (islet of Langerhans); insulinoma	epithelial	adherent
NIT-2	CRL-2364	mouse (transgenic)	pancreas, beta cell; adenoma; carboxypeptidase E defective	epithelial	adherent
NK-92	CRL-2407	human	natural killer cell; IL-2 dependent, cytotoxic to a wide range of malignant cells	lymphoblast	clusters in suspension
NK-92MI	CRL-2408	human	natural killer cell; IL-2 independent, cytotoxic to a wide range of malignant cells	lymphoblast	clusters in suspension
NL20	CRL-2503	human	lung (bronchus); immortalized with SV40 large T plasmid, p129	epithelial	adherent
NL20-TA	CRL-2504	human	lung (bronchus); immortalized with SV40 large T plasmid, p129	epithelial	adherent
NMU	CRL-1743	rat	mammary gland; adenocarcinoma	epithelial	adherent
NMu3Li	CRL-6447*	mouse	liver	adherent	
NMuLi	CRL-1638	mouse	liver	epithelial	adherent
NMuMG	CRL-1636	mouse	mammary gland	epithelial	adherent
NN-3	HB-8474†	mouse/mouse	hybridoma	lymphoblast	suspension
NN-4	HB-8473†	mouse/mouse	hybridoma	lymphoblast	suspension
NN-5	HB-8476†	mouse/mouse	hybridoma	lymphoblast	suspension
No Per	CRL-1327	human	skin; Ehlers-Danlos syndrome, possible heterozygote	fibroblast	adherent
NOR-10	CCL-197	mouse	skeletal muscle	fibroblast	adherent
NR8383	CRL-2192	rat	lung	macrophage	mixed
NRbM	CRL-1839	mouse/mouse	hybridoma	lymphoblast	suspension
NRK	CRL-6509*	rat	kidney	epithelial	adherent
NRK-49F	CRL-1570	rat	kidney	fibroblast	adherent
NRK-52E	CRL-1571	rat	kidney	epithelial	adherent
N-S.2.1	TIB-108	mouse/mouse	hybridoma	lymphoblast	suspension
N-S.4.1	TIB-110	mouse/mouse	hybridoma	lymphoblast	suspension
N-S.7	TIB-114	mouse/mouse	hybridoma	lymphoblast	suspension
N-S.8.1	TIB-109	mouse/mouse	hybridoma	lymphoblast	suspension
NTERA-2 cl.D1	CRL-1973	human	lung (metastasis); malignant; pluripotent embryonal carcinoma (testis primary)	fibroblast	adherent
NULLI-SCC1	CRL-1566	mouse	testis; teratocarcinoma; nullipotent	flattened colonies on coated surfaces	adherent
NZP-12	CRL-1921	cusimanse	lung	fibroblast	adherent
NZP-29	CRL-1925	oryx, short-horned	lung	epithelial	adherent
NZP-36	CRL-1922	zebra, Burchell's	kidney	fibroblast	adherent
NZP-46	CRL-1926	squirrel, plantain	embryo	fibroblast	adherent
NZP-60	CRL-1924	marmoset, black tailed	kidney	epithelial	adherent
OA1	CRL-6538*	sheep	brain	fibroblast	adherent
OA3.Ts	CRL-6546*	sheep	testis, fetal	epithelial	adherent
OA4.Bm	CRL-6547*	sheep	bone marrow, fetal	epithelial	adherent
OA4.K/S1	CRL-6549*	sheep	kidney, fetal	epithelial	adherent
OD-3	HB-10204	mouse/mouse	hybridoma	lymphoblast	suspension
OHH1.K	CRL-6193*	deer, Columbian black tail	kidney	fibroblast	adherent
OHH1.Li	CRL-6194*	deer, Columbian black tail	liver	epithelial	adherent
OHH1.Lu	CRL-6195*	deer, Columbian black tail	lung	mixed	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
OK	CRL-1840	opossum	kidney (cortex), proximal tubule	epithelial	adherent
OKM 1	CRL-8026†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 1	CRL-8000†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 10	CRL-8022†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 11	CRL-8027†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 3	CRL-8001†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 4	CRL-8002†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 5	CRL-8013†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 5	CRL-8016†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 6	CRL-8020†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 8	CRL-8014†	mouse/mouse	hybridoma	lymphoblast	suspension
OKT 9	CRL-8021†	mouse/mouse	hybridoma	lymphoblast	suspension
OLGA-PH-J/92	CRL-2576	crayfish	brain, cerebral ganglion	dendritic	adherent
OM 3-1.1	HB-134	mouse/mouse	hybridoma	lymphoblast	suspension
OMK(637-69)	CRL-1556	monkey, owl	kidney	epithelial	adherent
OML, clone 13C	CRL-2312	monkey, owl	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
OP9	CRL-2749	mouse	bone marrow, stroma	fibroblast	adherent
Or De	CRL-1366	human	skin; Ehlers-Danlos syndrome, type III	fibroblast	adherent
Os Te	CRL-1262	human	skin, fetal; osteogenesis imperfecta	fibroblast	adherent
OSU1	CRL-6178*	cat	whole fetus	fibroblast	adherent
OV-90	CRL-11732†	human	ascites (metastasis); malignant papillary serous adenocarcinoma (ovary primary)	epithelial	adherent
OVB-3	HB-9147†	mouse/mouse	hybridoma	lymphoblast	suspension
P-1	CRL-2588	mouse/mouse	hybridoma	lymphoblast	suspension
P1 1Ut (NBL-9)	CCL-74	raccoon	uterus	fibroblast	adherent
P1.17	TIB-10	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
P116	CRL-2676	human	T lymphocyte; ZAP-70 negative; model for T cell receptor signaling	lymphoblast	clusters in suspension
P116.cl39	CRL-2677	human	T lymphocyte; transfected with ZAP-70 expression vector; control for P116 cells	lymphoblast	clusters in suspension
P19	CRL-1825	mouse	embryo; teratocarcinoma; embryonic carcinoma	epithelial	adherent
P25.48	HB-9119†	mouse/mouse	hybridoma	lymphoblast	suspension
P3 6D4 (SCRF 43.1)	HB-9168†	mouse/mouse	hybridoma	lymphoblast	suspension
P3 8D2 (SCRF 43.1)	HB-9169†	mouse/mouse	hybridoma	lymphoblast	suspension
P3.6.2.8.1	TIB-8	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
P3/NSI/1-Ag4-1 (NS-1)	TIB-18	mouse	hybridoma fusion partner	lymphoblast	suspension
$P388D_1$	CCL-46	mouse	macrophage; monocyte; lymphoma	lymphoblast	suspension
$P388D_1$	TIB-63	mouse	macrophage; monocyte; lymphoma		adherent
P3D	HB-11129†	mouse/mouse	hybridoma	lymphoblast	suspension
P3HR-1	HTB-62	human	ascites; Burkitt's lymphoma; B lymphoblast	lymphoblast	suspension
P_3NP/PFn	HB-91	mouse/mouse	hybridoma	lymphoblast	suspension
P3X63Ag8	TIB-9	mouse	hybridoma fusion partner	lymphoblast	suspension
P3X63Ag8.653	CRL-1580	mouse	hybridoma fusion partner	lymphoblast	suspension
P3X63Ag8U.1	CRL-1597	mouse	hybridoma fusion partner	lymphoblast	suspension
p53NiS1	CRL-2619	mouse	fibrous histiocytoma; malignant; p53+/–	fibroblast	adherent
P-6	CRL-2589	mouse/mouse	hybridoma	lymphoblast	suspension
P815	TIB-64	mouse	mast cell; mastocytoma		mixed
P-9	CRL-2590	mouse/mouse	hybridoma	lymphoblast	suspension
PA 2.6	HB-118	mouse/mouse	hybridoma	lymphoblast	suspension
PA-1	CRL-1572	human	ascites (metastasis); teratocarcinoma (ovary primary)	epithelial	adherent
PA2.1	HB-117	mouse/mouse	hybridoma	lymphoblast	suspension
PA317	CRL-9078†	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PA317 cell line containing JR-*gal*	CRL-9995†	mouse	embryo	fibroblast	adherent
PA317 cyclin E-L	CRL-2187	mouse	embryo; produces a retrovirus containing the human cyclin E-L gene	fibroblast	adherent
PA317 cyclin E-S	CRL-2188	mouse	embryo; produces a retrovirus containing the human cyclin E-S gene	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
PA317 LXSN	CRL-2202	mouse	embryo; produces amphotropic control retrovirus; G418 resistant	fibroblast	adherent
PA317 LXSN 16E6	CRL-2204	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PA317 LXSN 16E6E7	CRL-2203	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PA317 LXSN 16E7	CRL-2205	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PA317 LXSN 6E6	CRL-2206	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PA317 LXSN 6E7	CRL-2207	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PAb 100	TIB-115	mouse/mouse	hybridoma	lymphoblast	suspension
PAb 101	TIB-117	mouse/mouse	hybridoma	lymphoblast	suspension
PAb 108	TIB-230	mouse/mouse	hybridoma	lymphoblast	suspension
PAb 122	TIB-116	mouse/mouse	hybridoma	lymphoblast	suspension
Pa Kel-1	CRL-1341	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
Pa Kel-2	CRL-1344	human	skin; Ehlers-Danlos syndrome, type I (autosomal dominant type)	fibroblast	adherent
Panc 02.03	CRL-2553	human	pancreas; adenocarcinoma	epithelial	adherent
Panc 02.13	CRL-2554	human	pancreas; adenocarcinoma	epithelial	adherent
Panc 03.27	CRL-2549	human	pancreas; adenocarcinoma	epithelial	adherent
Panc 04.03	CRL-2555	human	pancreas; adenocarcinoma	epithelial	adherent
Panc 05.04	CRL-2557	human	pancreas; adenocarcinoma	epithelial	adherent
Panc 08.13	CRL-2551	human	pancreas; adenocarcinoma	epithelial	adherent
Panc 10.05	CRL-2547	human	pancreas; adenocarcinoma; same patient as PL45	epithelial	adherent
PANC-1	CRL-1469	human	pancreas (duct); epithelioid carcinoma	epithelial	adherent
PC 61 5.3	TIB-222	rat/mouse	hybridoma	lymphoblast	suspension
PC-12	CRL-1721	rat	adrenal gland; pheochromocytoma	polygonal	loosely adherent clusters
PC-3	CRL-1435	human	bone (metastasis); adenocarcinoma (prostate primary)	epithelial	adherent
PCA 31.1	HB-12314†	mouse/mouse	hybridoma	lymphoblast	suspension
PCA 33.28	HB-12315†	mouse/mouse	hybridoma	lymphoblast	suspension
PDL-1	CRL-1882	mouse/mouse	hybridoma	lymphoblast	suspension
PEA 10	CRL-2215	mouse	embryo; LRP deficient	fibroblast	adherent
PEA 13	CRL-2216	mouse	embryo; LRP deficient	fibroblast	adherent
PEAKrapid	CRL-2828	human	kidney; transformed with adenovirus 5 DNA	loosely adherent	epithelial
Peccary.K	CRL-6488*	peccary	kidney		adherent
Per Sel	CRL-1107	human	skin; osteogenesis imperfecta	fibroblast	adherent
Pfeiffer	CRL-2632	human	pleural effusion (metastasis); diffuse large cell non-Hodgkin's lymphoma (B lymphocyte primary)	lymphoblast	suspension
PFHR 9	CRL-2423	mouse	embryo; embryonic carcinoma; HAT resistant	epithelial	adherent
PFSK-1	CRL-2060	human	brain (cerebellum); malignant primitive neuroectodermal tumor	fibroblast	adherent
PG13	CRL-10686†	mouse	embryo; retroviral packaging line	fibroblast	adherent
PG13/LN c8	CRL-10685†	mouse	embryo; produces an infectious retrovirus with a neomycin resistance gene	fibroblast	adherent
PG-4 (S^+L^-)	CRL-2032	cat	brain, astrocyte; Mo-MSV transformed	glial, astrocyte	adherent
pgsA-745	CRL-2242	hamster, Chinese	ovary; xylosyltransferase I deficient	epithelial	adherent
pgsB-618	CRL-2241	hamster, Chinese	ovary; galactosyltransferase I deficient	epithelial	adherent
pgsB-650	CRL-2243	hamster, Chinese	ovary; galactosyltransferase I deficient	epithelial	adherent
pgsC-605	CRL-2245	hamster, Chinese	ovary; sulfate transporter deficient	epithelial	adherent
pgsD-677	CRL-2244	hamster, Chinese	ovary; heparin sulfate deficient	epithelial	adherent
pgsE-606	CRL-2246	hamster, Chinese	ovary; heparin sulfate N-sulfotransferase deficient	epithelial	adherent
PHL	CRL-2750	Pacific herring	larvae	epithelial	adherent
PI-11	CRL-2591	mouse/mouse	hybridoma	lymphoblast	suspension
PI 153/3	TIB-198	mouse/mouse	hybridoma	lymphoblast	suspension
PK(15)	CCL-33	pig	kidney	epithelial	adherent
PK(D1)	CRL-6490*	pig	unknown		adherent
PK13	CRL-6489*	pig	kidney	epithelial	adherent
PK136	HB-191	mouse/mouse	hybridoma	lymphoblast	suspension
PK-2a/CL 13	CRL-6492*	pig	kidney		adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
PL45	CRL-2558	human	pancreas; ductal adenocarcinoma; same patient as Panc 10.05 cells	epithelial	adherent
PLC/PRF/5	CRL-8024	human	liver, Alexander cells; hepatoma	epithelial	adherent
PLHC-1	CRL-2406	topminnow	liver; hepatocellular carcinoma	epithelial	adherent
PMC2	CRL-9852†	human	spleen	lymphoblast	clusters in suspension, some adherent cells
PMJ2-PC	CRL-2457	mouse	peritoneal macrophage; infected with J2 virus	macrophage	mixed
PMJ2-R	CRL-2458	mouse	peritoneal macrophage; infected with J2 virus	macrophage	mixed
Pro$^-$5	CRL-1781	hamster, Chinese	ovary; proline auxotroph	epithelial	adherent
ProPak-A.52 Clone #52	CRL-12479†	human	kidney; amphotropic retroviral packaging line	epithelial	adherent
ProPakA.6	CRL-12006†	human	kidney; amphotropic retroviral packaging line	epithelial	adherent
ProPak-X.36	CRL-12007†	human	kidney; xenotropic retroviral packaging line	epithelial	adherent
Prost 410	HB-11426†	mouse/mouse	hybridoma	lymphoblast	suspension
PS 38	CRL-1950	mouse/mouse	hybridoma	lymphoblast	suspension
PS 41	CRL-1799	mouse/mouse	hybridoma	lymphoblast	suspension
PS 45	CRL-1798	mouse/mouse	hybridoma	lymphoblast	suspension
PS 60	CRL-1800	mouse/mouse	hybridoma	lymphoblast	suspension
PS 67	CRL-1797	mouse/mouse	hybridoma	lymphoblast	suspension
PS/2	CRL-1911	rat/mouse	hybridoma	lymphoblast	suspension
Ψ 2 BAG alpha	CRL-9560†	mouse	embryo; produces a retrovirus containing the beta-galactosidase gene	fibroblast	adherent
ψ2 12S6	CRL-1808	mouse	embryo; produces a retrovirus containing the adenovirus 12S E1A gene	fibroblast	adherent
ψ2 13s1	CRL-1809	mouse	embryo; produces a retrovirus containing the adenovirus 13S E1A gene	fibroblast	adherent
ψ2 DAP	CRL-1949	mouse	embryo; produces a retrovirus containing human alkaline phosphatase gene	fibroblast	adherent
PSP-36	CRL-11171†	monkey, African green	kidney	fibroblast	adherent
Pt K1 (NBL-3)	CCL-35	potoroo	kidney	epithelial	adherent
PT67	CRL-12284†	mouse	embryo; amphotropic retroviral packaging line	fibroblast	adherent
PtK1	CRL-6493*	potoroo	kidney	epithelial	adherent
PtK2 (NBL-5)	CCL-56	potoroo	kidney	epithelial	adherent
PT-K75	CRL-2528	pig	nasal turbinate, mucosa	fibroblast	adherent
P-tyr-1	CRL-1955	mouse/mouse	hybridoma	lymphoblast	suspension
PU5-1.8 (PU5-1R)	TIB-61	mouse	macrophage; monocyte; lymphoma		mixed
PV1	HB-12352†	hamster/mouse	hybridoma	lymphoblast	suspension
PWR-1E	CRL-11611†	human	prostate; immortalized with Ad12-SV40 hybrid virus	epithelial	adherent
PYS-2	CRL-2745	mouse	yolk sac, parietal endoderm; carcinoma	epithelial	adherent
PZ-HPV-7	CRL-2221	human	prostate, epithelium; transformed with HPV-18	epithelial	adherent
QCRL-1	HB-11765†	mouse/mouse	hybridoma	lymphoblast	suspension
QCRL-3	HB-11766†	mouse/mouse	hybridoma	lymphoblast	suspension
QM7	CRL-1962	quail, Japanese	muscle; chemically induced fibrosarcoma	fibroblast	adherent
QNR/D	CRL-2532	quail, Japanese	neuroretina		adherent
QNR/K2	CRL-2533	quail, Japanese	neuroretina		adherent
QPN1 12C9 (SCRF 43.2)	HB-9500†	mouse/mouse	hybridoma	lymphoblast	suspension
QPN1 22F5 (SCRF 43.2)	HB-9509†	mouse/mouse	hybridoma	lymphoblast	suspension
QT6	CRL-1708	quail, Japanese	fibrosarcoma	fibroblast	adherent
R1	SCRC-1011	mouse	embryonic stem cell; derived from 129 substrain	spherical colony	adherent
R 1610	CRL-1657	hamster, Chinese	lung	fibroblast	adherent
R1.1	TIB-42	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
R1/E	SCRC-1036	mouse	embryo; embryonic stem cell	spherical colony	adherent
R1.G1	TIB-44	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
R1-2	HB-227	rat/mouse	hybridoma	lymphoblast	suspension
R1-5D9	CRL-2360	rat/mouse	hybridoma	lymphoblast	suspension
R17 208.2	TIB-220	rat/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
R17 217.1.3	TIB-219	rat/mouse	hybridoma	lymphoblast	suspension
R187	CRL-1912	rat/mouse	hybridoma	lymphoblast	suspension
R1E/TL8x.1	TIB-43	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
R1E/TL8x.1.G1. OUA^r.1	TIB-45	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
R2-10F6	CRL-2358	rat/mouse	hybridoma	lymphoblast	suspension
R_{24}	HB-8445†	mouse/mouse	hybridoma	lymphoblast	suspension
R2-9A5	CRL-2357	rat/mouse	hybridoma	lymphoblast	suspension
R2C	CCL-97	rat	testis; Leydig cell tumor	epithelial	adherent
R2LBLN	CRL-6070*	bovine	lymph node		

ATCC Cell Biology Trivia #11

When did ATCC move to Rockville, Maryland?

ATCC moved into its first custom-designed facility in Rockville, Maryland, in 1964. It was a vast improvement over the two previous locations, which were small apartment buildings retrofitted with laboratories.

R-3327-AT-1	JHU-29	rat	prostate; cancer		adherent
R-3327-AT-2.1	JHU-30	rat	prostate; cancer		adherent
R-3327-AT-3.1	JHU-31	rat	prostate; cancer		adherent
R3327-G	JHU-3	rat	prostate; cancer		adherent
R3 [33-10ras3]	CRL-2764	rat	Schwann cell; immortalized with SV40 large T antigen	neuronal	adherent
R4-6A2	HB-170	rat/mouse	hybridoma	lymphoblast	suspension
R6.5.D6.E9.B2	HB-9580†	mouse/mouse	hybridoma	lymphoblast	suspension
R63	HB-9490†	mouse/mouse	hybridoma	lymphoblast	suspension
R-970-5	CRL-7723*	human	bone; osteosarcoma	transformed	adherent
R9ab	CCL-193	rabbit	lung, fetal	fibroblast	adherent
Ra Bot	CRL-1265	human	skin; Marfan syndrome	fibroblast	adherent
Ra Lot	CRL-1289	human	skin; Marfan syndrome	fibroblast	adherent
RA3-2C2/1	TIB-145	rat/mouse	hybridoma	lymphoblast	suspension
RA3-3A1/6.1	TIB-146	rat/mouse	hybridoma	lymphoblast	suspension
RAB-9	CRL-1414	rabbit	skin	fibroblast	adherent
RAG	CCL-142	mouse	kidney; renal adenocarcinoma	amoeboid	adherent
Raji	CCL-86	human	B lymphocyte; Burkitt's lymphoma	lymphoblast	suspension
Ramos (RA 1)	CRL-1596	human	B lymphocyte; Burkitt's lymphoma (American)	lymphoblast	suspension
Ramos.2G6.4C10	CRL-1923	human	B lymphocyte; Burkitt's lymphoma (American)	lymphoblast	suspension
Ran De	CRL-1287	human	skin; osteogenesis imperfecta (congenita)	fibroblast	adherent
Ran-2	TIB-119	mouse/mouse	hybridoma	lymphoblast	suspension
Raszip 6	CRL-1917	mouse	embryo; produces a retrovirus containing the vHa-*ras* oncogene	fibroblast	adherent
Rat1-R12	CRL-2210	rat	connective tissue	epithelial	adherent
Rat2	CRL-1764	rat	fetus	fibroblast	adherent
RATV-NRK	CRL-6510*	rat	unknown, possibly kidney		
RAW 264.7	TIB-71	mouse	monocyte; macrophage; AMLV-induced tumor		adherent
RAW 264.7γNO(–)	CRL-2278	mouse	macrophage; monocyte		adherent
RAW 309 Cr.1	TIB-69	mouse	monocyte; macrophage; AMLV-induced tumor		adherent
RAW 309F.1.1	TIB-51	mouse	spleen; lymphoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
RAW 8.1	TIB-50	mouse	spleen; B lymphocyte; lymphoma	lymphoblast	suspension
Ray Hot	CRL-1226	human	skin; Ehlers-Danlos syndrome, type III	fibroblast	adherent
RBA	CRL-1747	rat	mammary gland; adenocarcinoma	epithelial	adherent
RBL-1	CRL-1378	rat	peripheral blood; basophil; leukemia	lymphoblast	suspension
RBL-2H3	CRL-2256	rat	peripheral blood; basophil; leukemia	fibroblast	adherent
RC-4B/C	CRL-1903	rat	anterior pituitary; adenoma	epithelial	adherent
RD	CCL-136	human	muscle; rhabdomyosarcoma	spindle and large	adherent
RD-ES	HTB-166	human	bone; Ewing's sarcoma	epithelial	mixed
RDP 45/20	TIB-98	mouse/mouse	hybridoma	lymphoblast	suspension
Reh	CRL-8286†	human	unknown; acute lymphocytic leukemia (non-T, non-B)	lymphoblast	suspension
RF/6A	CRL-1780	monkey, Rhesus	eye (choroid), fetal	epithelial	adherent
RFGd10WE	CRL-6190*	chicken	unknown, possibly whole embryo		
RFGd11WE	CRL-6191*	chicken	unknown, possibly whole embryo		
RFGd12WE	CRL-6192*	chicken	unknown, possibly whole embryo		
RFGd2WE	CRL-6182*	chicken	embryo		
RFGd3WE	CRL-6183*	chicken	embryo		
RFGd4WE	CRL-6184*	chicken	embryo		
RFGd5WE	CRL-6185*	chicken	embryo		
RFL-6	CCL-192	rat	lung	fibroblast	adherent
RG11/39.4	TIB-170	mouse/mouse	hybridoma	lymphoblast	suspension
RG2	CRL-2433	rat	brain, undifferentiated malignant glioma	glial	adherent
RG7/1.30	TIB-173	mouse/mouse	hybridoma	lymphoblast	suspension
RG7/11.1	TIB-174	mouse/mouse	hybridoma	lymphoblast	suspension
RG7/7.6 HL	TIB-172	mouse/mouse	hybridoma	lymphoblast	suspension
RG7/9.1 HLK	TIB-169	mouse/mouse	hybridoma	lymphoblast	suspension
RG9/6.13 HLK	TIB-167	mouse/mouse	hybridoma	lymphoblast	suspension
RIIIMT	CRL-6449*	mouse	mammary gland; cancer	epithelial	adherent
RIN-14B	CRL-2059	rat	pancreas (islet of Langerhans); insulinoma; produces somatostatin and L-dopa-decarboxylase but not insulin	epithelial	adherent
RIN-5F	CRL-2058	rat	pancreas (islet of Langerhans); insulinoma; produces insulin and L-dopa-decarboxylase but not somatostatin	epithelial	adherent
RIN-m	CRL-2057	rat	pancreas (islet of Langerhans); insulinoma; produces insulin and somatostatin	epithelial	adherent
RIN-m5F	CRL-11605†	rat	pancreas (islet of Langerhans); insulinoma; produces insulin and L-dopa-decarboxylase but not somatostatin	epithelial	adherent
RK_{13}	CCL-37	rabbit	kidney	epithelial	adherent
RK3E	CRL-1895	rat	kidney	epithelial	adherent
RKO	CRL-2577	human	colon; carcinoma; control for RKO-E6 and RKO-AS45-1 cells	epithelial	adherent
RKO-AS45-1	CRL-2579	human	colon; carcinoma; apoptosis model; overexpression of GADD45	epithelial	adherent
RKO-E6	CRL-2578	human	colon; carcinoma; apoptosis model; negligible p53 expression	epithelial	adherent
RL	CRL-2261	human	ascites; non-Hodgkin's lymphoma; B lymphoblast	lymphoblast	suspension
RL-65	CRL-10354†	rat	lung	epithelial	adherent
RL95-2	CRL-1671	human	uterus (endometrium); carcinoma	epithelial	adherent
RLE-6TN	CRL-2300	rat	lung	epithelial	adherent
RLSD06	HB-8527†	mouse/mouse	hybridoma	lymphoblast	suspension
RLSD09	HB-8525†	mouse/mouse	hybridoma	lymphoblast	suspension
RLTM01	HB-8526†	mouse/mouse	hybridoma	lymphoblast	suspension
RLTM02	HB-8523†	mouse/mouse	hybridoma	lymphoblast	suspension
RMC	CRL-2573	rat	kidney		adherent
RmcB	CRL-2379	mouse/mouse	hybridoma	lymphoblast	suspension
Rn 3T	CRL-6511*	rat	unknown; chemically induced tumor		
Rn 4T	CRL-6512*	rat	unknown; chemically induced tumor		
Rn 5TES	CRL-6513*	rat	testis		
Rn1T	CRL-6598*	rat	mammary gland; cancer		adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Rn2T	CRL-6599*	rat	mammary gland; cancer		suspension
Rn6T	CRL-6601*	rat	unknown; 7, 12-dimethylbenz(a)anthracene-induced tumor		
Ro Bon	CRL-1248	human	skin; osteogenesis imperfecta (tarda)	fibroblast	adherent
Ro Dow	CRL-1337	human	skin; Ehlers-Danlos syndrome, type II	fibroblast	adherent
Ro Shi	CRL-1310	human	skin; porokeratosis	fibroblast	adherent
Ro Vid	CRL-1308	human	skin; xeroderma pigmentosum; presumed heterozygote	fibroblast	adherent
Ron Har	CRL-1131	human	skin; Ehlers-Danlos syndrome	fibroblast	adherent
RPC5.4	TIB-12	mouse	hybridoma fusion partner	lymphoblast	suspension
RPE-J	CRL-2240	rat	eye (retina), pigmented epithelium; SV40 transformed	epithelial	adherent
RPMI 1788	CCL-156	human	peripheral blood, B lymphocyte; EBNA positive	lymphoblast	suspension
RPMI 1846	CCL-49	hamster, Syrian golden	skin; melanotic melanoma	epithelial	adherent
RPMI 2650	CCL-30	human	pleural effusion (metastasis); squamous cell carcinoma (nasal septum primary)	epithelial	adherent
RPMI 6666	CCL-113	human	peripheral blood, lymphoblast; Hodgkin's disease	lymphoblast	suspension
RPMI 7666	CCL-114	human	peripheral blood, B lymphoblast; EBV producing	lymphoblast	suspension
RPMI 8226	CCL-155	human	peripheral blood, B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
RPMI-7951	HTB-66	human	skin; malignant melanoma	epithelial	adherent
RR1022	CCL-47	rat	sarcoma	epithelial	adherent
RS4;11	CRL-1873	human	bone marrow; acute lymphoblastic leukemia; t(4;11) translocation	lymphoblast	suspension
RSC96	CRL-2765	rat	Schwann cell; immortalized spontaneously	neuronal	adherent
RSOI	CRL-1419	human	skin; osteogenesis imperfecta	fibroblast	adherent
RT101	CRL-2002	mouse	skin (epidermis); chemically transformed	epithelial	adherent
RT4	HTB-2	human	urinary bladder; transitional cell papilloma	epithelial	adherent
RT4-D6P2T	CRL-2768	rat	Schwann cell; schwannoma	neuronal	adherent
RTG-2	CCL-55	trout, rainbow	mixed testis and ovary	fibroblast	adherent
RTgill-W1	CRL-2523	trout, rainbow	gill	epithelial	adherent
RTG-P1	CRL-2829	rainbow trout	gonadal tissue	fibroblast	adherent
RTH-149	CRL-1710	trout, rainbow	liver; hepatoma	epithelial	adherent
Ru Ra	CRL-1315	human	skin; osteogenesis imperfecta (congenita)	fibroblast	adherent
RW.4	SCRC-1018	mouse	embryo; embryonic stem cell	spherical colony	adherent
RWPE-1	CRL-11609†	human	prostate; transfected with Ki-MSV	epithelial	adherent
RWPE-2	CRL-11610†	human	prostate; transfected with HPV-18 and Ki-MSV	epithelial	adherent
RWPE2-W99	CRL-2853	human	prostate	epithelial	adherent
S194/5.XXO.BU.1	TIB-20	mouse	hybridoma fusion partner	lymphoblast	suspension
S194/5.XXO-1	TIB-19	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
S1A(Thy-1⁻b)	TIB-231	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S1A.TB.4.8.2	TIB-27	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S1E4	HB-8332†	mouse/mouse	hybridoma	lymphoblast	suspension
S3D3	HB-8331†	mouse/mouse	hybridoma	lymphoblast	suspension
S49 (Thy-1-a)	TIB-36	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S49.1	TIB-28	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S49.1G.3	TIB-34	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S49.1G.3 PHA.100/0	TIB-35	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S49.1H.1AG.6/2	TIB-29	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S49.1TB.2	TIB-30	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S49.1TB.4 DEX R.63	TIB-33	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
S4B6-1	HB-10968†	rat/mouse	hybridoma	lymphoblast	suspension
S5	HB-9255†	mouse/mouse	hybridoma	lymphoblast	suspension
S6F1	HB-9579†	mouse/mouse	hybridoma	lymphoblast	suspension
S9	CRL-2778	human	bronchus; cystic fibrosis; immortalized with Ad12-SV40 hybrid	epithelial	adherent
S9.6	HB-8730†	mouse/mouse	hybridoma	lymphoblast	suspension
SA13	HB-8501†	human/human	hybridoma	lymphoblast	suspension
SA22	CRL-2052	mouse/mouse	hybridoma	lymphoblast	suspension
Sal	CRL-2543	mouse	ascites; dibenzanthracene-induced malignant fibrosarcoma	lymphoblast	suspension

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
Sal Mat	CRL-1110	human	skin; Lesch-Nyhan syndrome	fibroblast	adherent
Sal/N	CRL-2544	mouse	dibenzanthracene-induced fibrosarcoma	fibroblast	adherent
Saos-2	HTB-85	human	bone; osteosarcoma	epithelial	adherent
Sarcoma 180	TIB-66	mouse	sarcoma		suspension
Sar Nis	CRL-1231	human	skin; pseudoachondroplasia (autosomal dominant)	fibroblast	adherent
SBAC	CRL-1796	bovine	adrenal gland (cortex); zona fasciculata; zona reticularis	fibroblast	adherent
SC	CRL-9855†	human	peripheral blood; macrophage; monocyte	monocyte/ macrophage	suspension
SC-1	CRL-8756†	human	peripheral blood, B lymphocyte; EBV transformed	lymphoblast	suspension
SC-1	CRL-1404	mouse	embryo	fibroblast	adherent
SC-1	CRL-6450*	mouse	embryo	epithelial	adherent
SC-71	HB-277	mouse/mouse	hybridoma	lymphoblast	suspension
SCA-9 clone 15	CRL-1734	mouse	submandibular salivary gland; carcinoma	fibroblast	adherent
SCaBER	HTB-3	human	urinary bladder; transitional cell carcinoma	epithelial	adherent
SCC-15	CRL-1623	human	tongue; squamous cell carcinoma		adherent
SCC-25	CRL-1628	human	tongue; squamous cell carcinoma		adherent
SCC-4	CRL-1624	human	tongue; squamous cell carcinoma		adherent on feeder cells
SCC-9	CRL-1629	human	tongue; squamous cell carcinoma		adherent on feeder cells
SCC-PSA1	CRL-1535	mouse	embryonic carcinoma; teratocarcinoma; pluripotent		adherent on feeder cells
Schneider's Drosophila Line 2	CRL-1963	*Drosophila*	embryo	epithelial	mixed
SCP	CRL-1700	sheep	brain (choroid plexus)		adherent
SE-1.3	HB-137	mouse/mouse	hybridoma	lymphoblast	suspension
Sf 1 Ep (NBL-11)	CCL-68	rabbit, cottontail	skin; epidermis	epithelial	adherent
SF1-1.1.10	HB-159	mouse/mouse	hybridoma	lymphoblast	suspension
Sf1Ep	CRL-6502*	rabbit, cottontail	skin (ear)	mixed	adherent
Sf9	CRL-1711	armyworm, fall	ovary	epithelial	adherent
SFR3-DR5	HB-151	rat/mouse	hybridoma	lymphoblast	suspension
SFR8-B6	HB-152	rat/mouse	hybridoma	lymphoblast	suspension
SH2	HB-10743†	mouse/mouse	hybridoma	lymphoblast	suspension
SH3	HB-10744†	mouse/mouse	hybridoma	lymphoblast	suspension
SH-34	CRL-2405	mouse/mouse	hybridoma	lymphoblast	suspension
SH4	HB-10745†	mouse/mouse	hybridoma	lymphoblast	suspension
SH-4	CRL-7724*	human	pleural effusion (metastasis); melanoma (skin primary)	transformed	adherent
Shh Light II	CRL-2795	mouse	embryo	fibroblast	adherent
SHM-D33	CRL-1668	human/mouse	hybridoma fusion partner	lymphoblast	suspension
SHP-77	CRL-2195	human	lung; carcinoma; small cell lung cancer; large cell variant	epithelial	mixed
SH-SY5Y	CRL-2266	human	bone marrow (metastasis); neuroblastoma (brain primary)	epithelial	adherent
SiHa	HTB-35	human	cervix; squamous cell carcinoma	epithelial	adherent
SIRC (Statens Seruminstitut Rabbit Cornea)	CCL-60	rabbit	eye (cornea)	fibroblast	adherent
SJD.1	CRL-2296	zebrafish	caudal fin	fibroblast	adherent
SJK-132-20	CRL-1640	mouse/mouse	hybridoma	lymphoblast	suspension
SJK-237-71	CRL-1645	mouse/mouse	hybridoma	lymphoblast	suspension
SJK-287-38	CRL-1644	mouse/mouse	hybridoma	lymphoblast	suspension
SJL/JB	CRL-6452*	mouse	spleen		
SJL/JC	CRL-6453*	mouse	spleen		
SJRH30	CRL-2061	human	bone marrow (metastasis); rhabdomyosarcoma (muscle primary)	fibroblast	adherent
SJSA-1	CRL-2098	human	bone; osteosarcoma; multipotential sarcoma	fibroblast	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
SK-BR-3	HTB-30	human	pleural effusion (metastasis); adenocarcinoma (colon primary)	epithelial	adherent
SK-CO-1	HTB-39	human	ascites (metastasis); colorectal adenocarcinoma (colon primary)	epithelial	adherent
SK-ES-1	HTB-86	human	bone; sarcoma (anaplastic osteosarcoma or Ewing's sarcoma)	epithelial	adherent
SK-HEP-1	HTB-52	human	ascites (metastasis); adenocarcinoma (liver primary)	epithelial	adherent
SK-LMS-1	HTB-88	human	vulva; leiomyosarcoma	fibroblast	adherent
SK-LU-1	HTB-57	human	lung; adenocarcinoma	epithelial	adherent
SK-MEL-1	HTB-67	human	thoracic duct (metastasis); malignant melanoma (skin primary)	spherical	suspension
SK-MEL-2	HTB-68	human	skin (metastasis); malignant melanoma (skin primary)	polygonal	adherent
SK-MEL-24	HTB-71	human	skin; malignant melanoma	stellate	adherent
SK-MEL-28	HTB-72	human	skin; malignant melanoma	polygonal	adherent
SK-MEL-3	HTB-69	human	lymph node (metastasis); malignant melanoma (skin primary)	fibroblast	adherent
SK-MEL-31	HTB-73	human	skin; malignant melanoma	epithelial	adherent
SK-MEL-5	HTB-70	human	skin; malignant melanoma	stellate	adherent
SK-MES-1	HTB-58	human	pleural effusion (metastasis); squamous cell carcinoma (lung primary)	epithelial	adherent
SK-N-AS	CRL-2137	human	bone marrow (metastasis); embryonal neuroblastoma (brain/neuroblast primary)	epithelial	adherent
SK-N-BE(2)	CRL-2271	human	bone marrow (metastasis); neuroblastoma brain primary)	neuroblast	adherent
SK-N-DZ	CRL-2149	human	bone marrow (metastasis); embryonal neuroblastoma (brain/neuroblast primary)	epithelial	adherent
SK-NEP-1	HTB-48	human	pleural effusion (metastasis); Wilms' tumor (kidney primary)	epithelial	suspension
SK-N-FI	CRL-2142	human	bone marrow (metastasis); embryonal neuroblastoma (brain/neuroblast primary)	epithelial	adherent
SK-N-MC	HTB-10	human	supraorbital area (metastasis); neuroepithelioma (brain primary)	epithelial	adherent
SK-N-SH	HTB-11	human	bone marrow (metastasis); neuroblastoma (brain primary)	epithelial	adherent
SKO-007	CRL-8033-1†	human	hybridoma fusion partner	lymphoblast	suspension
SKO-007 [clone J3]	CRL-8033-2†	human	hybridoma fusion partner	lymphoblast	suspension
SK-OV-3	HTB-77	human	ascites (metastasis); adenocarcinoma (ovary primary)	epithelial	adherent
SK-PN-DW	CRL-2139	human	embryonal tumor; retroperitoneal; malignant; primitive neuroectodermal tumor	epithelial	adherent
SK-UT-1	HTB-114	human	uterus; mesodermal tumor (mixed); consistent with leiomyosarcoma	epithelial	adherent
SK-UT-1B	HTB-115	human	uterus (endometrium); mesodermal tumor (mixed); consistent with leiomyosarcoma	epithelial	adherent
SKW 6.4	TIB-215	human	peripheral blood, B lymphocyte; EBV transformed	lymphoblast	suspension
SI/SI4	CRL-2452	mouse	liver, stroma, fetal; Steel factor deficient; SV40 large T immortalized	fibroblast	adherent
SI/SI4 hSCF220	CRL-2453	mouse	liver, stroma, fetal; SV40 large T immortalized	fibroblast	adherent
SI/SI4 hSCF248	CRL-2454	mouse	liver, stroma, fetal	fibroblast	adherent
SL-29	CRL-1590	chicken	embryo	fibroblast	adherent
SM27-1045	HB-11917†	mouse/mouse	hybridoma	lymphoblast	suspension
SML, clone 4D8	CRL-2311	monkey, Bolivian squirrel	peripheral blood, B lymphoblast; EBV transformed	lymphoblast	clusters in suspension
SMT/2A LNM	CRL-6602*	rat	mammary gland; adenocarcinoma		adherent
SNU-1	CRL-5971	human	stomach; gastric carcinoma	epithelial	clusters in suspension
SNU-16	CRL-5974	human	ascites (metastasis); gastric carcinoma (stomach primary)	epithelial	clusters in suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
SNU-182	CRL-2235	human	liver; hepatocellular carcinoma	epithelial	adherent
SNU-387	CRL-2237	human	liver; pleomorphic hepatocellular carcinoma	epithelial	adherent
SNU-398	CRL-2233	human	liver; hepatocellular carcinoma	epithelial	mixed
SNU-423	CRL-2238	human	liver; pleomorphic hepatocellular carcinoma	epithelial	adherent
SNU-449	CRL-2234	human	liver; hepatocellular carcinoma	epithelial	adherent
SNU-475	CRL-2236	human	liver; hepatocellular carcinoma	epithelial	adherent
SNU-5	CRL-5973	human	ascites (metastasis); gastric carcinoma (stomach primary)	epithelial	clusters in suspension
SNU-C1	CRL-5972	human	peritoneum (metastasis); adenocarcinoma colon primary)	epithelial	mixed
SNU-C2A	CCL-250.1	human	cecum; colorectal carcinoma	epithelial	mixed
SNU-C2B	CCL-250	human	cecum; colorectal carcinoma	epithelial	mixed
SOB-15	CRL-2301	trout, rainbow	liver	epithelial	adherent
SODK1 [SODK1293]	CRL-12386†	human	kidney; transformed with adenovirus 5 DNA; packaging cell line	epithelial	adherent
Sol8	CRL-2174	mouse	skeletal muscle	fibroblast	adherent

ATCC Cell Biology Trivia #12

Who made the discovery that a virus could cause cancer?

The discovery that a virus could cause cancer was made by Peyton Rous in 1910, who induced tumor growth in chickens by injecting them with a cell-free tumor extract. The Rous sarcoma virus was later found to be an RNA retrovirus.

Sp2/01-Ag	CRL-8006†	mouse	hybridoma fusion partner	lymphoblast	suspension
Sp2/0-Ag14	CRL-1581	mouse/mouse	hybridoma fusion partner	lymphoblast	suspension
Sp2/0-Ag14	CRL-8287†	mouse/mouse	hybridoma fusion partner	lymphoblast	suspension
Sp2/mIL-6	CRL-2016	mouse/mouse	hybridoma fusion partner	lymphoblast	suspension
SQMK-FP	CRL-2762	Bolivian squirrel monkey	kidney, tubule	epithelial	adherent
SR	CRL-2262	human	pleural effusion (metastasis); large cell immuno-blastic lymphoma (unknown primary)	lymphoblast	suspension
SR-4987	CRL-2028	mouse	bone marrow, stroma	fibroblast	adherent
Src++	CRL-2497	mouse	embryo; immortalized with SV40 large T antigen; deficient for Yes and Fyn	fibroblast	adherent
S-S.1	TIB-111	mouse/mouse	hybridoma	lymphoblast	suspension
S-S.3	TIB-112	mouse/mouse	hybridoma	lymphoblast	suspension
ST	CRL-1746	pig	testis	fibroblast	adherent
ST486	CRL-1647	human	ascites, B lymphoblast; Burkitt's lymphoma	lymphoblast	suspension
STK 1	CRL-1652	mouse/mouse	hybridoma	lymphoblast	suspension
STO	CRL-1503	mouse	embryo	fibroblast	adherent
SU.86.86	CRL-1837	human	liver (metastasis); ductal carcinoma (pancreas primary)	epithelial	adherent
SUP-B15	CRL-1929	human	B lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
Super Dome	CRL-2286	dog	kidney	epithelial	adherent
Super Tube	CRL-2285	dog	kidney	epithelial	adherent
SUP-T1	CRL-1942	human	T lymphoblast; lymphoblastic leukemia	lymphoblast	suspension
SV40 MES 13	CRL-1927	mouse (transgenic)	kidney (glomerulus)	myofibroblast-like	adherent
SV40LT-SMC Clone	CRL-2018	rat	aorta; smooth muscle	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
HEP-SA					
SV63	HB-8766†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
SV7tert	CRL-2461	human	kidney; angiomyolipoma; immortalized with SV40 large T antigen and human telomerase	epithelial	adherent
SVEC4-10	CRL-2181	mouse	axillary lymph node, vascular epithelium; endothelial; SV40 transformed	epithelial	adherent
SVEC4-10EE2	CRL-2167	mouse	axillary lymph node, vascular epithelium; endothelial; SV40 transformed	cobblestone; endothelial	adherent
SVEC4-10EHR1	CRL-2161	mouse	axillary lymph node, vascular epithelium; SV40 transformed	spindle cell; epithelial	adherent
SVG p12	CRL-8621†	human	brain, astroglia; SV40 transformed	fibroblast	adherent
SV-HUC-1	CRL-9520†	human	ureter (uroepithelium)	epithelial	adherent
SVR	CRL-2280	mouse	pancreas (islet of Langerhans), endothelium		adherent
SVR A221a	CRL-2386	mouse	pancreas (islet of Langerhans), endothelium		adherent
SVR bag4	CRL-2387	mouse	pancreas (islet of Langerhans), endothelium		adherent
SV-T2	CCL-163.1	mouse	embryo	fibroblast	adherent
SW 1088	HTB-12	human	brain; astrocytoma	fibroblast	adherent
SW 1271	CRL-2177	human	lung; carcinoma; small cell lung cancer	epithelial	adherent
SW 1353	HTB-94	human	bone; chondrosarcoma	fibroblast	adherent
SW 156	CRL-2175	human	kidney; hypernephroma	epithelial	adherent
SW 1573	CRL-2170	human	lung; alveolar cell carcinoma	epithelial	adherent
SW 1783	HTB-13	human	brain; astrocytoma	fibroblast	adherent
SW 1990	CRL-2172	human	spleen (metastasis); adenocarcinoma (pancreas primary)	epithelial	adherent
SW 626	HTB-78	human	ovary (metastasis); adenocarcinoma (colon primary)	epithelial	adherent
SW 684	HTB-91	human	connective tissue; fibrosarcoma	fibroblast	adherent
SW 780	CRL-2169	human	urinary bladder; transitional cell carcinoma	epithelial	adherent
SW 872	HTB-92	human	connective tissue; liposarcoma	fibroblast	adherent
SW 900	HTB-59	human	lung; squamous cell carcinoma	epithelial	adherent
SW 954	HTB-117	human	vulva; squamous cell carcinoma	epithelial	adherent
SW 962	HTB-118	human	lymph node (metastasis); carcinoma (vulva primary)	mixed	adherent
SW 982	HTB-93	human	synovium; synovial sarcoma	mixed	adherent
SW10	CRL-2766	mouse	Schwann cell; immortalized with SV40 large T antigen	neuronal	adherent
SW1116	CCL-233	human	colon; colorectal adenocarcinoma	epithelial	adherent
SW-13	CCL-105	human	adrenal gland (cortex); primary small cell carcinoma	epithelial	adherent
SW1417	CCL-238	human	colon; colorectal adenocarcinoma	epithelial	adherent
SW1463	CCL-234	human	rectum; colorectal adenocarcinoma	epithelial	adherent
SW403	CCL-230	human	colon; colorectal adenocarcinoma	epithelial	adherent
SW48	CCL-231	human	colon; colorectal adenocarcinoma	epithelial	adherent
SW480	CCL-228	human	colon; colorectal adenocarcinoma	epithelial	adherent
SW527	CRL-7940*	human	mammary gland; Paget's disease	epithelial	adherent
SW579	HTB-107	human	thyroid; squamous cell carcinoma	epithelial	adherent
SW620	CCL-227	human	lymph node (metastasis); colorectal adenocarcinoma (colon primary)	epithelial	adherent
SW756	CRL-10302†	human	cervix; squamous cell carcinoma	epithelial	adherent
SW837	CCL-235	human	rectum; adenocarcinoma	epithelial	adherent
SW948	CCL-237	human	colon; colorectal adenocarcinoma	epithelial	adherent
Swiss SFME	CRL-9391†	mouse	embryo	fibroblast	clusters in suspension
SWLA1	HB-12559†	mouse/mouse	hybridoma	lymphoblast	suspension
SWLA2	HB-12560†	mouse/mouse	hybridoma	lymphoblast	suspension
SWLA3	HB-12558†	mouse/mouse	hybridoma	lymphoblast	mixed suspension
SWR/J.We	CRL-6458*	mouse	embryo		
SYF	CRL-2459	mouse	embryo; immortalized with SV40 large T antigen; deficient for Src, Yes, and Fyn	fibroblast	adherent
SYF + c-Src	CRL-2498	mouse	embryo; immortalized with SV40 large T antigen;	fibroblast	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
			deficient for Src, Yes, and Fyn		
T/G HA-VSMC	CRL-1999	human	aorta, smooth muscle	fibroblast	adherent
T1 (174 x CEM.T1)	CRL-1991	human/human	lymphoblast cell hybrid	lymphoblast	suspension
T11D7e2	TIB-103	mouse/mouse	hybridoma	lymphoblast	suspension
T1-73	CRL-7943*	human	bone; osteosarcoma	fibroblast	adherent
T2 (174 x CEM.T2)	CRL-1992	human/human	lymphoblast cell hybrid	lymphoblast	suspension
T24	HTB-4	human	urinary bladder; transitional cell carcinoma	epithelial	adherent
T27A	TIB-57	mouse	spleen; leukemia	lymphoblast	suspension
T3-3A1	HB-2	mouse/mouse	hybridoma	lymphoblast	suspension
T^{3}6274	CRL-2012	mouse	skin (epidermis); chemically transformed	epithelial	adherent
T4 Clone 5 (10-0101, 0062-83)	HB-8500†	mouse/mouse	hybridoma	lymphoblast	suspension
T-47D	HTB-133	human	pleural effusion (metastasis); ductal carcinoma (mammary gland primary)	epithelial	adherent
T529-15D3-18-1A3-1B7	HB-10500†	mouse/mouse	hybridoma	lymphoblast	suspension
T529-15D3-2E5-4G12-1	HB-10501†	mouse/mouse	hybridoma	lymphoblast	suspension
T84	CCL-248	human	lung (metastasis); colorectal carcinoma (colon primary)	epithelial	adherent
T84.66A3.1A.1F2	HB-8747†	mouse/mouse	hybridoma	lymphoblast	suspension
T98G	CRL-1690	human	brain; glioblastoma multiforme	fibroblast	adherent
TA 99	HB-8704†	mouse/mouse	hybridoma	lymphoblast	suspension
TAC-1	CRL-10632†	marmoset	colon; adenocarcinoma	fibroblast and epithelial	mixed
Tal Jo	CRL-1267	human	skin; osteogenesis imperfecta (congenita)	fibroblast	adherent
TA-1	HB-10206	mouse/mouse	hybridoma	lymphoblast	suspension
T-AL/N	CRL-6514*	mouse	unknown		
TALL-104	CRL-11386†	human	T lymphoblast; acute lymphoblastic leukemia	lymphoblast	suspension
TAM.T	CRL-6001*	anteater	skin	polygonal	adherent
tao BpRcl	CRL-2218	mouse	liver; hepatoma	epithelial	adherent
Tb 1 Lu	CCL-88	bat, free-tailed	lung	epithelial	adherent
TB 28-2	HB-61	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
Tb1.Lu	CRL-6564*	bat, free-tailed	lung	epithelial	adherent
TBM-54	CRL-2051	toad, tropical	urinary bladder	epithelial	adherent
TC-1	CRL-2785	mouse	lung; HPV-16 E6/E7 and c-Ha-*ras* cotransformed	epithelial	adherent
TCCSUP	HTB-5	human	urinary bladder; transitional cell carcinoma	epithelial	adherent
TCMK-1	CCL-139	mouse	kidney	epithelial	adherent
TD.1	CRL-2232	mouse/mouse	hybridoma	lymphoblast	suspension
TE 115.T	CRL-7744*	human	mixed connective and soft tissue; fibromatosis	fibroblast	adherent
TE 125.T	CRL-7945*	human	rhabdomyosarcoma	fibroblast	adherent
TE 130.T	CRL-7746*	human	bone; sacrococcygeal teratoma		adherent
TE 149.T	CRL-7751*	human	muscle; leiomyosarcoma		
TE 159.T	CRL-7752*	human	unknown; rhabdomyosarcoma	fibroblast	adherent
TE 161.T	CRL-7753*	human	lymph node; possible Burkitt's lymphoma	fibroblast	adherent
TE 170.M	CRL-7754*	human	connective tissue; fascia		
TE 175.T	CRL-7755*	human	lymph node; lymphosarcoma	fibroblast	adherent
TE 199.T	CRL-7757*	human	thymus; thymic alymphoplasia		
TE 206.T	CRL-7758*	human	unknown; adenocarcinoma		
TE 353.Sk	CRL-7761*	human	skin	fibroblast	adherent
TE 354.T	CRL-7762*	human	skin; basal cell carcinoma		
TE 381.T	CRL-7763*	human	mixed connective and soft tissue; rhabdomyosa	fibroblast	adherent
TE 417.T	CRL-7765*	human	bone; osteosarcoma	fibroblast	adherent
TE 418.T	CRL-7766*	human	bone; osteosarcoma	fibroblast	adherent
TE 441.T	CRL-7767*	human	connective tissue; rhabdomyosarcoma	mixed	adherent
TE 617.T	CRL-7774*	human	connective tissue; rhabdomyosarcoma	epithelial	adherent
TE 76.T	CRL-7732*	human	bone; sacrococcygeal teratoma		
TE 84.T	CRL-7944*	human	ovary; teratoma		adherent
TE 90.Sk	CRL-7739*	human	skin	fibroblast	adherent

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
TE 91.Sk	CRL-7740*	human	skin	fibroblast	adherent
TE 98.T	CRL-7741*	human	unknown; histiocytosis		
TE15	HB-206	mouse/mouse	hybridoma	lymphoblast	suspension
TE16	HB-210	mouse/mouse	hybridoma	lymphoblast	suspension
TE19	HB-211	mouse/mouse	hybridoma	lymphoblast	suspension
TE3	HB-209	mouse/mouse	hybridoma	lymphoblast	suspension
Te39	HB-8577†	human/mouse	hybridoma	lymphoblast	suspension
TE4	HB-207	mouse/mouse	hybridoma	lymphoblast	suspension
TE7	HB-208	mouse/mouse	hybridoma	lymphoblast	suspension
TE8	HB-212	mouse/mouse	hybridoma	lymphoblast	suspension
Tep Be	CRL-1336	human	skin; Cockayne syndrome	fibroblast	adherent
Tera-1	HTB-105	human	embryonal malignant carcinoma	epithelial	adherent
Tera-2	HTB-106	human	embryonal malignant carcinoma	epithelial	adherent
TF-1	CRL-2003	human	bone marrow, erythroblast; model for cytokine (IL-3) signaling pathways and myeloid progenitor cell differentiation	lymphoblast	suspension
TF-1.CN5a.1	CRL-2512	human	bone marrow; erythroblast; erythroleukemia; CTNF responsive	lymphoblast	suspension

ATCC Cell Biology Trivia #13

When did ATCC move to Manassas, Virginia?

ATCC moved from Rockville, Maryland, to its current facility in 1998. Transporting the liquid nitrogen units filled with vials was planned down to the smallest detail, except that the keys to open the trailers could not be located. Upon arriving in Manassas, the locks had to be removed with bolt cutters.

TF-1a	CRL-2451	human	bone marrow, erythroblast; control cell line for TF-1	lymphoblast	suspension
TFTA1	CRL-1771	mouse/mouse	hybridoma	lymphoblast	suspension
TFTB1	CRL-1759	mouse/mouse	hybridoma	lymphoblast	suspension
TGP47	CRL-2141	mouse (transgenic)	pancreas; acinar cell carcinoma	epithelial	adherent
TGP49	CRL-2136	mouse (transgenic)	pancreas; acinar cell carcinoma	epithelial	adherent
TGP52	CRL-2140	mouse (transgenic)	pancreas; islet cell tumor; insulinoma	epithelial	adherent
TGP55	CRL-2150	mouse (transgenic)	pancreas; small cell tumor	epithelial	adherent
TGP61	CRL-2135	mouse (transgenic)	pancreas; islet cell tumor; insulinoma	epithelial	adherent
TH-1, Subline B1	CCL-50	turtle, box	heart	epithelial	adherent
THB-5	HB-135	mouse/mouse	hybridoma	lymphoblast	suspension
THB-7	HB-136	mouse/mouse	hybridoma	lymphoblast	suspension
THLE-2	CRL-2706†	human	liver, left lobe; SV40 transformed	epithelial	adherent
THLE-3	CRL-11233†	human	liver, left lobe; immortalized with SV40 T antigen	epithelial	adherent
THP-1	TIB-202	human	monocyte; acute monocytic leukemia	monocyte	suspension
TIMI.4	TIB-37	mouse	thymus; lymphoma	lymphoblast	suspension
TIMI.4G.1.3	TIB-38	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
tk^- ts13	CRL-1632	hamster, Syrian golden	kidney		adherent
TK#1	CRL-11383†	mouse	embryonic stem cell; disrupted IRF-2 gene	epithelial	adherent on feeder cells
TK-1	CRL-2396	mouse	T lymphocyte; lymphoma	lymphoblast	suspension
TK6	CRL-8015	human	spleen; hereditary spherocytosis	lymphoblast	suspension
TM1	HB-169	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
TM-28	CRL-2803	mouse	fibrosarcoma	fibroblast	adherent
TM3	CRL-1714	mouse	testis	epithelial	adherent
TM-34	CRL-2801	mouse	fibrosarcoma	fibroblast	adherent
TM4	CRL-1715	mouse	testis	epithelial	adherent
TM-7	CRL-2798	mouse	fibrosarcoma	fibroblast	adherent
TO 166.M	CRL-7776*	human	connective tissue	fibroblast	adherent
TO 175.T	CRL-7779*	human	skin (metastasis); lymphoma; Hodgkin's disease (lymph node primary)		adherent
TO 203.T	CRL-7780*	human	bone; osteosarcoma		adherent
Toledo	CRL-2631	human	peripheral blood, B lymphocyte; diffuse large cell lymphoma, non-Hodgkin's	lymphoblast	suspension
TOV-112D	CRL-11731†	human	ovary; primary malignant adenocarcinoma; endometrioid carcinoma	epithelial	adherent
TOV-21G	CRL-11730†	human	ovary; primary malignant adenocarcinoma; clear cell carcinoma	epithelial	adherent
TR 310	HB-219	rat/mouse	hybridoma	lymphoblast	suspension
TRA-171	CRL-1591	mosquito	whole larva	fibroblast	adherent
TRAMP-C1	CRL-2730	mouse (transgenic)	prostate; adenocarcinoma	epithelial	adherent
TRAMP-C2	CRL-2731	mouse (transgenic)	prostate; adenocarcioma	epithelial	adherent
TRAMP-C3	CRL-2732	mouse (transgenic)	prostate (metastasis); adenocarcinoma (prostate primary)	epithelial	adherent
TS 106	HB-12497†	mouse/mouse	hybridoma	lymphoblast	suspension
TS1/18.1.2.11	HB-203	mouse/mouse	hybridoma	lymphoblast	suspension
TS1/22.1.1.13	HB-202	mouse/mouse	hybridoma	lymphoblast	suspension
TS2/16.2.1	HB-243	mouse/mouse	hybridoma	lymphoblast	suspension
TS2/18.1.1	HB-195	mouse/mouse	hybridoma	lymphoblast	suspension
TS2/4.1.1	HB-244	mouse/mouse	hybridoma	lymphoblast	suspension
TS2/7.1.1	HB-245	mouse/mouse	hybridoma	lymphoblast	suspension
TS2/9.1.4.3	HB-205	mouse/mouse	hybridoma	lymphoblast	suspension
tsc2 ang1	CRL-2620	mouse	sarcoma; cutaneous; heterozygous for tuberin; tuberous sclerosis model		adherent
TSHR-R5T-34	CRL-2683	mouse/mouse	hybridoma	lymphoblast	suspension
TSHR-R5T-44	CRL-2681	mouse/mouse	hybridoma	lymphoblast	mixed
TSHR-T3-365	CRL-2684	mouse/mouse	hybridoma	lymphoblast	suspension
TSHR-T5-51	CRL-2680	mouse/mouse	hybridoma	lymphoblast	suspension
TSHR-T5U-317	CRL-2682	mouse/mouse	hybridoma	lymphoblast	suspension
TT	CRL-1803	human	thyroid; medulla carcinoma	epithelial	adherent
Tu To	CRL-1298	human	skin; osteogenesis imperfecta (severe congenita)	fibroblast	adherent
TUR	CRL-2367	human	macrophage; histiocytic lymphoma; neomycin resistant	monocyte	suspension
U-118 MG	HTB-15	human	brain; glioblastoma; astrocytoma	mixed	adherent
U-138 MG	HTB-16	human	brain; glioblastoma	polygonal	adherent
U-2 OS	HTB-96	human	bone; osteosarcoma	epithelial	adherent
U266B1	TIB-196	human	B lymphoblast; plasmacytoma; myeloma	lymphoblast	suspension
U-87 MG	HTB-14	human	brain; glioblastoma; astrocytoma	epithelial	adherent
U-937	CRL-1593.2	human	macrophage; histiocytic lymphoma	monocyte	suspension
UACC-812	CRL-1897	human	mammary gland; ductal carcinoma	epithelial	adherent
UACC-893	CRL-1902	human	mammary gland; primary ductal carcinoma	epithelial	adherent
UC10-4F10-11	HB-304	hamster/mouse	hybridoma	lymphoblast	suspension
UC1B	CRL-6465*	mouse	embryo		adherent
UC1BC1	CRL-6460*	mouse	embryo	epithelial	adherent
UC1BC2	CRL-6461*	mouse	embryo	epithelial	adherent
UC1BC3	CRL-6462*	mouse	embryo	epithelial	adherent
UC1BC4	CRL-6463*	mouse	embryo	epithelial	adherent
UC1BC5	CRL-6464*	mouse	embryo	epithelial	adherent
UC3-10A6	CRL-1988	hamster/mouse	hybridoma	lymphoblast	suspension
UC7	HB-9753†	mouse/mouse	hybridoma	lymphoblast	suspension
UC7-13D5	CRL-1989	hamster/mouse	hybridoma	lymphoblast	suspension
UC8-1B9	CRL-1968	hamster/mouse	hybridoma	lymphoblast	suspension
UCD/AB 6.01	HB-8693†	mouse/mouse	hybridoma	lymphoblast	suspension
UCD/AB 6.11	HB-8458†	mouse/mouse	hybridoma	lymphoblast	suspension

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
UCD/PR 10.11	HB-8694†	mouse/mouse	hybridoma	lymphoblast	suspension
UMC-11	CRL-5975	human	lung; carcinoid	epithelial	adherent
UMNSAH/DF-1	CRL-12203†	chicken	embryo	fibroblast	adherent
UMR-106	CRL-1661	rat	bone; osteosarcoma	epithelial	adherent
UMR-108	CRL-1663	rat	bone; osteosarcoma	fibroblast	adherent
UM-UC-3	CRL-1749	human	urinary bladder; transitional cell carcinoma	epithelial	adherent
USASK/DSIL-LHRH-A1	HB-9094†	mouse/mouse	hybridoma	lymphoblast	suspension with feeder cells
UV135	CRL-1867	hamster, Chinese	ovary; defective in nucleotide excision repair	fibroblast	mixed
UV20	CRL-1862	hamster, Chinese	ovary; defective in nucleotide excision repair	fibroblast	mixed
UV24	CRL-1866	hamster, Chinese	ovary; defective in nucleotide excision repair	fibroblast	mixed
UV41	CRL-1860	hamster, Chinese	ovary; defective in nucleotide excision repair	fibroblast	mixed
UV5	CRL-1865	hamster, Chinese	ovary; defective in nucleotide excision repair	fibroblast	mixed
UVE-10	CRL-6515*	rat	unknown		
V79-4	CCL-93	hamster, Chinese	lung	fibroblast	adherent
VA-ES-BJ	CRL-2138	human	bone marrow (metastasis); carcinoma, epithelioid (bone primary)	epithelial	adherent
VD-10	HB-68	mouse/mouse	hybridoma	lymphoblast	suspension
vEPT	CRL-2087	rabbit	kidney (proximal tubule)	epithelial	adherent
Vero	CCL-81	monkey, African green	kidney	epithelial	adherent
VERO 76	CRL-1587	monkey, African green	kidney	epithelial	adherent
VERO C1008	CRL-1586	monkey, African green	kidney	epithelial	adherent
VH 2	CCL-140	viper, Russell's	heart	fibroblast	adherent
VIII-6G10	HB-10519†	mouse/mouse	hybridoma	lymphoblast	suspension
VK2/E6E7	CRL-2616	human	vagina, mucosa; HPV-16 E6/E7 transformed	epithelial	adherent
VLN3G2	HB-8636†	human/human	hybridoma	lymphoblast	suspension
VLN6H2	HB-8633†	human/human	hybridoma	lymphoblast	suspension
VM-2	HB-8530†	mouse/mouse	hybridoma	lymphoblast	suspension
VSW	CCL-129	viper, Russell's	spleen (metastatic); tumor (unknown primary)	epithelial	adherent
vT{2}	CRL-2712	mouse	liver; hepatoma	epithelial	adherent
VX7	CRL-6504*	rabbit	unknown; papilloma virus-induced carcinoma	fibroblast	adherent
W162	CRL-2783	African green monkey	kidney	epithelial	adherent
W-20-17	CRL-2623	mouse	bone marrow; stroma; assay system for hBMP-2	fibroblast	adherent
W4F.5B	HB-9282†	mouse/mouse	hybridoma	lymphoblast	suspension
W6/32	HB-95	mouse/mouse	hybridoma	lymphoblast	suspension
Wa Fen	CRL-1271	human	skin; Marfan syndrome	fibroblast	adherent
WAPS 12.2	HB-299	mouse/mouse	hybridoma	lymphoblast	suspension
WBC264-9C	HB-8902†	human /mouse	macrophage; mouse/human hybrid	macrophage	adherent
WBE	CRL-2773	white bass	embryo	epithelial	adherent
WCH-17	CRL-2082	woodchuck, Eastern	liver; hepatoma	epithelial	adherent
WEHI 164	CRL-1751	mouse	methylcholanthrene-induced fibrosarcoma	fibroblast	adherent
WEHI 22.1	TIB-54	mouse	thymus, T and B cell characteristics; lymphoma	lymphoblast	suspension
WEHI 7.1	TIB-53	mouse	thymus, T lymphocyte; lymphoma	lymphoblast	suspension
WEHI-13VAR	CRL-2148	mouse	fibrosarcoma	fibroblast	adherent
WEHI-231	CRL-1702	mouse	B lymphocyte; lymphoma	lymphoblast	suspension
WEHI-265.1	TIB-204	mouse	monocyte; AMLV-induced tumor		suspension
WEHI-274.1	CRL-1679	mouse	monocyte; AMLV-induced tumor	monocyte	suspension
WEHI-279	CRL-1704	mouse	B lymphocyte; lymphoma	lymphoblast	suspension
WEHI-3	TIB-68	mouse	myelomonocyte; macrophage like; leukemia		mixed
WERI-Rb-1	HTB-169	human	eye (retina); retinoblastoma	grape-like clusters	suspension
WFL3C6.1	HB-8157†	rat/mouse	hybridoma	lymphoblast	suspension
WFL4F12.3	HB-8156†	rat/mouse	hybridoma	lymphoblast	suspension
Wgd5	CRL-1817	mouse	connective tissue; MoMuLV retroviral packaging line	fibroblast	adherent
WI 38	CCL-75	human	lung	fibroblast	adherent
WI-26 VA4	CCL-95.1	human	lung	epithelial	adherent
WI-38 VA-13 subline 2R	CCL-75.1	human	lung	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
WiDr	CCL-218	human	colon; colorectal adenocarcinoma	epithelial	adherent
WI-L2-729HF2	CRL-8062†	human	hybridoma fusion partner	lymphoblast	suspension
WIL2-NS	CRL-8155†	human	hybridoma fusion partner	lymphoblast	suspension
WIL2-S	CRL-8885†	human	hybridoma fusion partner	lymphoblast	suspension
WI-MN-1	HB-8672†	mouse/mouse	hybridoma	lymphoblast	suspension
Win Mec	CRL-1172	human	skin; xeroderma pigmentosum, presumed heterozygote	fibroblast	adherent
WISH	CCL-25	human	HeLa contaminant	epithelial	adherent
WM 1043	CRL-6466*	mouse	embryo		
WM-115	CRL-1675	human	skin; melanoma	epithelial	adherent
WM1552C	CRL-2808	human	skin; primary superficial spreading melanoma in radial growth phase/vertical growth phase	spindle-shaped	adherent
WM-266-4	CRL-1676	human	skin (metastasis); melanoma (skin primary)	epithelial	adherent
WM278	CRL-2809	human	skin, melanocyte; nodular melanoma in vertical growth phase	epithelial	adherent
WM35	CRL-2807	human	skin, melanocyte; primary superficial spreading melanoma in radial growth phase/vertical growth phase	spindle-shaped	adherent
WM39	CRL-2811	human	skin, melanocyte; primary melanoma in vertical growth phase	spindle-shaped	adherent
WM793B	CRL-2806	human	skin, melanocyte; primary superficial spreading melanoma in vertical growth phase	spindle-shaped	adherent
Wo Fel	CRL-1273	human	skin; Ehlers-Danlos syndrome	fibroblast	adherent
Wo Jo	CRL-1247	human	skin; osteogenesis imperfecta (tarda)	fibroblast	adherent

ATCC Cell Biology Trivia #14

Who invented the process of making monoclonal antibodies?

Antibodies made to order became a reality after 1975, when César Milstein and Georges Köhler produced a monoclonal antibody from a hybridoma. At the time they were advised not to patent the process because its commercial potential was unclear. There are currently almost 1,000 hybridomas deposited at ATCC.

WPE1-NA22	CRL-2849	human	prostate	epithelial	adherent
WPE1-NB11	CRL-2851	human	prostate	epithelial	adherent
WPE1-NB14	CRL-2850	human	prostate	epithelial	adherent
WPE1-NB26	CRL-2852	human	prostate	epithelial	adherent
WPMY-1	CRL-2854	human	prostate; adenovirus 12-SV40 hybrid transformed	spindle-shaped	adherent
WR19L	TIB-52	mouse	lymphoma	lymphoblast	suspension
WR19M.1	TIB-70	mouse	monocyte; macrophage; AMLV-induced tumor		adherent
WR21	CRL-2189	mouse (transgenic)	submandibular salivary gland; adenocarcinoma	fibroblast	adherent
WRL 68	CL-48	human	HeLa contaminant	epithelial	adherent
WS1	CRL-1502	human	skin	fibroblast	adherent
WSS-1	CRL-2029	human	kidney; expresses rat GABAA receptor	epithelial	adherent
WU E-14	CRL-2255	mouse/mouse	hybridoma	lymphoblast	suspension
WU E-4	CRL-2247	mouse/mouse	hybridoma	lymphoblast	suspension
X16C8.5	TIB-209	mouse	B lymphocyte; reticulum cell sarcoma	lymphoblast	suspension
X22	CRL-2228	mouse/mouse	hybridoma	lymphoblast	suspension
XB-2	CL-177	mouse	keratinocyte; teratoma		adherent on feeder cells

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Alphanumeric

Name	ATCC® No.	Species	Source/Application	Morphology	Growth Mode
XC	CCL-165	rat	Rous sarcoma virus-induced tumor	epithelial	adherent
XC1.5/51	TIB-16	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
XLK-WG	CRL-2527	toad, South African clawed	kidney	epithelial	adherent
XMMCO-791	HB-9173†	mouse/mouse	hybridoma	lymphoblast	suspension
XMMEN-OE5	HB-9081†	mouse/mouse	hybridoma	lymphoblast	suspension
XMMME-001	HB-8759†	mouse/mouse	hybridoma	lymphoblast	suspension
XMMME-002	HB-8760†	mouse/mouse	hybridoma	lymphoblast	suspension
XP17BE	CRL-1360	human	skin; xeroderma pigmentosum	fibroblast	adherent
xrs5	CRL-2348	hamster, Chinese	ovary; Ku autoantigen mutant	epithelial	adherent
XR-V15B	CRL-2349	hamster, Chinese	lung	fibroblast	adherent
XS63	TIB-17	mouse	B lymphocyte; plasmacytoma; myeloma	lymphoblast	suspension
XVI E6E6G10	HB-9496†	mouse/mouse	hybridoma	lymphoblast	suspension
Y-1	CCL-79	mouse	adrenal gland (cortex)	epithelial	adherent
Y13-238	CRL-1741	rat/rat	hybridoma	lymphoblast	suspension
Y13-259	CRL-1742	rat/rat	hybridoma	lymphoblast	suspension
Y-17	HB-179	mouse/mouse	hybridoma	lymphoblast	suspension
Y-3	HB-176	mouse/mouse	hybridoma	lymphoblast	suspension
Y3-Ag 1.2.3	CRL-1631	rat	hybridoma fusion partner	lymphoblast	suspension
Y-3P	HB-183	mouse/mouse	hybridoma	lymphoblast	suspension
Y79	HTB-18	human	eye (retina); retinoblastoma	multicellular clusters	suspension
YAC-1	TIB-160	mouse	Mo-MuLV induced lymphoma	lymphoblast	suspension
YB2/0	CRL-1662	rat/rat	hybridoma fusion partner	lymphoblast	suspension
YI 328-18	HB-9306†	mouse/mouse	hybridoma	lymphoblast	suspension
YN1/1.7.4	CRL-1878	rat/rat	hybridoma	lymphoblast	suspension
YPEN-1	CRL-2222	rat	prostate, endothelium; immortalized with adenovirus12-SV40 virus hybrid	epithelial	adherent
YS001	CRL-11776†	mouse	embryonic stem cell	epithelial	adherent
ZEM2S	CRL-2147	zebrafish	embryo	fibroblast	adherent
ZF4	CRL-2050	zebrafish	embryo	fibroblast	adherent
ZFL	CRL-2643	zebrafish	liver, parenchymal cells	epithelial	adherent
ZR-75-1	CRL-1500	human	ascites (metastasis); ductal carcinoma (mammary gland epithelium primary)	epithelial	adherent
ZR-75-30	CRL-1504	human	ascites (metastasis); ductal carcinoma (mammary gland epithelium primary)	epithelial	adherent

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Tissue Source

This index consists of cell lines from noncancerous tissues listed by anatomical source. For more information on a cell line, see the main list starting on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Species	Cell Line Name	ATCC® No.	Description
Adrenal Gland			
bovine	SBAC	CRL-1796	cortex; zona fasciculata, zona reticularis
bovine	EJG	CRL-8659†	capillary endothelium
mouse	Y-1	CCL-79	cortex
Amniotic Fluid			
human	Hs 598.Af	CRL-7358	
Aorta			
human	T/G HA-VSMC	CRL-1999	smooth muscle
human	HAAE-1	CRL-2472	abdominal
human	HAAE-2	CRL-2473	abdominal
rat	A7r5	CRL-1444	thoracic; smooth muscle
rat	A-10	CRL-1476	thoracic; medial layer
rat	SV40LT-SMC Clone HEP-SA	CRL-2018	smooth muscle
Artery *See also* Aorta			
bovine	CPAE	CCL-209	pulmonary; vascular endothelium
bovine	CPA 47	CRL-1733	pulmonary; vascular endothelium
human	HFAE-2	CRL-2474	femoral
human	HIAE-78	CRL-2475	iliac
human	HIAE-101	CRL-2478	iliac
human	HPAE-26	CRL-2598	pulmonary
human	HIAE-38	CRL-2599	iliac
human	HIAE-65	CRL-2606	iliac
human	HIAE-55	CRL-2608	iliac
Bladder			
toad, tropical	TBM-54	CRL-2051	urinary bladder
Bone *See also* Bone Marrow			
human	hFOB 1.19	CRL-11372†	osteoblast; SV40 large T antigen transfected
human	Hs 820.T	CRL-7552	heterophilic osteofication
human	Hs 855.T	CRL-7592*	mesenchyme; fibrous dysplasia
mouse	MC3T3-E1 Subclone 4	CRL-2593	calvaria
mouse	MC3T3-E1 Subclone 14	CRL-2594	calvaria
mouse	MC3T3-E1 Subclone 24	CRL-2595	calvaria
mouse	MC3T3-E1 Subclone 30	CRL-2596	calvaria
Bone Marrow			
bovine	BBm	CRL-6016*	
bovine	FB5.Bm	CRL-6043*	fetal
cat	FC6.Bm	CRL-6081*	
human	HS-5	CRL-11882†	stroma; HPV-16 E6/E7 transformed
human	TF-1	CRL-2003	erythroblast
human	TF-1a	CRL-2451	erythroblast
human	HS-27A	CRL-2496	stroma
mouse	32D Clone 3	CRL-11346†	
mouse	MPRO Cell Line, Clone 2.1	CRL-11422†	neutrophil progenitor
mouse	EML Cell Line, Clone 1	CRL-11691†	lymphohematopoietic progenitor
mouse	JAWSII	CRL-11904†	immature dendritic cell
mouse	FDC-P1	CRL-12103†	
mouse	D1 ORL UVA	CRL-12424†	multipotent stromal precursor
mouse	7F2	CRL-12557†	osteoblast

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
mouse	M2-10B4	CRL-1972	stroma
mouse	SR-4987	CRL-2028	stroma
mouse	LADMAC	CRL-2420	
mouse	23 ScCr	CRL-2751	macrophage; deficient in toll-like receptor 4 (TLR4)
mouse	OP9	CRL-2749	stroma
mouse	2E8	TIB-239	
sheep	OA4.Bm	CRL-6547*	fetal
Brain			
cat	PG-4 (S^+L^-)	CRL-2032	astrocyte; virus transformed
cat	G355-5	CRL-2033	astrocyte
crayfish	OLGA-PH-J/92	CRL-2576	cerebral ganglion
ferret	Mpf	CRL-1656	
human	HCN-1A	CRL-10442†	cortical neuron
human	HCN-2	CRL-10742†	cortical neuron
human	SVG p12	CRL-8621†	astroglia; SV40 transformed
mouse	EOC 2	CRL-2467	microglia/macrophage
mouse	EOC 13.31	CRL-2468	microglia/macrophage
mouse	EOC 20	CRL-2469	microglia/macrophage
mouse	C8-D30	CRL-2534	cerebellum
mouse	C8-S	CRL-2535	cerebellum
mouse	C8-B4	CRL-2540	cerebellum
mouse	C8-D1A	CRL-2541	cerebellum
mouse, transgenic	CATH.a	CRL-11179†	neuron
rat	DI TNC_1	CRL-2005	diencephalon; transfected
rat	CTX TNA2	CRL-2006	cortex; transfected
rat	H19-7/IGF-IR	CRL-2526	hippocampus
sheep	SCP	CRL-1700	choroid plexus
sheep	OA1	CRL-6538*	
Brain/Neural Tissue			
quail, Japanese	QNR/D	CRL-2532	neuroretina
quail, Japanese	QNR/K2	CRL-2533	neuroretina
Breast *See* Mammary Gland			
Cervix			
human	Ect1/E6E7	CRL-2614	ectocervix; HPV-16 E6/E7 transformed
human	End1/E6E7	CRL-2615	endocervix; HPV-16 E6/E7 transformed
Colon			
human	CCD-18Co	CRL-1459	
human	CCD-33Co	CRL-1539	
human	CCD-112 CoN	CRL-1541	
human	CCD 841 CoN	CRL-1790	fetal
human	CCD 841 CoTr	CRL-1807	fetal; SV40 transformed
human	FHC	CRL-1831	fetal
Connective Tissue			
human	Hs 212.M	CRL-7173*	fascia
human	Hs 364.Ct	CRL-7254*	fascia
human	Hs 365.Ct	CRL-7255*	fascia
human	Hs 762.Sk	CRL-7492*	
human	Hs 764.Mu	CRL-7494*	
human	Hs 782.T	CRL-7512*	benign histiocytic lesion
human	TE 170.M	CRL-7754*	fascia
human	TO 166.M	CRL-7776*	
human	HT 768.M	CRL-7790*	abnormal
mouse	NCTC clone 929	CCL-1	subcutaneous; areolar and adipose
mouse	L-M	CCL-1.2	subcutaneous; areolar and adipose
mouse	L-M(TK^-)	CCL-1.3	subcutaneous; areolar and adipose
mouse	A9	CCL-1.4	subcutaneous; areolar and adipose
mouse	NCTC clone 2472	CCL-11	subcutaneous; areolar and adipose
mouse	NCTC clone 2555	CCL-12	subcutaneous; areolar and adipose
mouse	J26	CRL-1802	subcutaneous; areolar and adipose

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Connective Tissue continued			
mouse	J27-neo	CRL-2372	subcutaneous; areolar and adipose
mouse	J27-B7	CRL-2374	subcutaneous; areolar and adipose
mouse	L Wnt-5A	CRL-2814	subcutaneous; areolar and adipose
mouse	L-alpha-1a L-cells	CRL-11138†	subcutaneous; areolar and adipose
mouse	L-alpha-2A L-cells	CRL-11180†	subcutaneous; areolar and adipose
mouse	L-alpha-2C L-cells	CRL-11181†	subcutaneous; areolar and adipose
mouse	L-NGC-alpha2B L-cells	CRL-10275†	subcutaneous; areolar and adipose
mouse	A-9	CRL-6319*	
rat	Rat1-R12	CRL-2210	
Dermis *See* Skin			
Embryo *See also* Fetus			
bass, white	WBE	CRL-2773	
cat	OSU1	CRL-6178*	whole
cat	FC60(A).We	CRL-6571*	whole
cat	NCE-F161	CRL-8727†	
chicken	UMNSAH/DF-1	CRL-12203†	
chicken	SL-29	CRL-1590	
chicken	Gd1WE	CRL-6181*	
chicken	RFGd2WE	CRL-6182*	
chicken	RFGd3WE	CRL-6183*	
chicken	RFGd4WE	CRL-6184*	
chicken	RFGd5WE	CRL-6185*	
Drosophila	Schneider's Drosophila Line 2	CRL-1963	
duck, Pekin	Duck embryo	CCL-141	
frog, grass	ICR 134	CCL-128	gynogenetic haploid
frog, grass	ICR-2A	CCL-145	androgenetic haploid
mouse	BALB/3T3 clone A31	CCL-163	
mouse	SV-T2	CCL-163.1	
mouse	M-MSV-BALB/3T3	CCL-163.2	
mouse	K-BALB (K-234)	CCL-163.3	
mouse	BALB/3T12-3	CCL-164	
mouse	C_3H/10T1/2, Clone 8	CCL-226	
mouse	NCTC 4093	CCL-63	
mouse	3T3-Swiss albino	CCL-92	
mouse	3T6-Swiss albino	CCL-96	
mouse	3T3-L1	CL-173	
mouse	36.5 (CD8+)	CRL-11116†	stem cell; pluripotent
mouse	9TR#1	CRL-11379†	stem cell
mouse	TK#1	CRL-11383†	stem cell
mouse	ES-D3	CRL-11632†	stem cell; pluripotent
mouse	SC-1	CRL-1404	
mouse	C3H/MCA clone 15	CRL-1411	
mouse	C3H/MCA clone 16	CRL-1412	
mouse	STO	CRL-1503	
mouse	3197-3	CRL-1568	
mouse	NIH/3T3	CRL-1658	
mouse	MOP-8	CRL-1709	
mouse	EJ-6-2-Bam-6a	CRL-1888	
mouse	ES-D3	CRL-1934	stem cell; pluripotent
mouse	56B3	CRL-2542	stem cell
mouse	127TAg	CRL-2817	immortalized with SV40 large T antigen
mouse	151TAg	CRL-2823	immortalized with SV40 large T antigen
mouse	283TAg	CRL-2822	immortalized with SV40 large T antigen
mouse	3T3 MEFs KO	CRL-2753	fibroblasts; Cav-1 (–/–)
mouse	3T3 MEFs WT	CRL-2752	fibroblasts; Cav-1 (+/+)
mouse	308TAg	CRL-2819	immortalized with SV40 large T antigen
mouse	88TAg	CRL-2820	immortalized with SV40 large T antigen
mouse	92TAg	CRL-2816	immortalized with SV40 large T antigen
mouse	BALB SFME Serum Free Mouse Embryo	CRL-9392	serum free

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
mouse	MB352	CRL-2821	spontaneously immortalized
mouse	MB355	CRL-2818	immortalized with SV40 large T antigen
mouse	Shh Light II	CRL-2795	GLI-responsive firefly luciferase reporter element
mouse	B/C3T3.We	CRL-6327*	
mouse	B/CWE	CRL-6334*	
mouse	C57L/J.We	CRL-6336*	
mouse	hr/hr (WE) A	CRL-6357*	
mouse	hr/hr (WE) B	CRL-6358*	
mouse	K:Molv NIH/3T3	CRL-6361*	
mouse	ME	CRL-6371*	
mouse	MM4.We	CRL-6377*	pooled
mouse	MM22.We	CRL-6400*	
mouse	MM23.We	CRL-6401*	
mouse	MM27.We	CRL-6402*	
mouse	MM29.We	CRL-6403*	
mouse	MM31.We	CRL-6405*	
mouse	MM34.We	CRL-6408*	
mouse	MM36We	CRL-6413*	
mouse	MM41We	CRL-6416*	
mouse	SC-1	CRL-6450*	
mouse	SWR/J.We	CRL-6458*	
mouse	UC1BC1	CRL-6460*	
mouse	UC1BC2	CRL-6461*	
mouse	UC1BC3	CRL-6462*	
mouse	UC1BC4	CRL-6463*	
mouse	UC1BC5	CRL-6464*	
mouse	UC1B	CRL-6465*	
mouse	WM 1043	CRL-6466*	
mouse	+/+ (A)	CRL-6470*	pooled
mouse	+/+ (B)	CRL-6471*	pooled
mouse	12-A-3	CRL-6476*	SV40 transformed
mouse	HPME	CRL-6589*	
mouse	B2-1	CRL-8085†	thymidine kinase negative (TK-)
mouse	Swiss SFME	CRL-9391†	
mouse	PA317 cell line containing JR-*gal*	CRL-9995†	
mouse	ES-C57BL/6	SCRC-1002	stem cell
mouse	BALB/c CL.7	TIB-80	
mouse	BLK CL.4	TIB-81	
mouse	BALB/B 0.75BAE A.1R.1 HD A.8	TIB-84	chemically transformed
mouse	BALB/c 10ME HD A.5R.1	TIB-85	chemically transformed
mouse	BALB/c 10CrMCA A.2R.1	TIB-86	chemically transformed
mouse	BALB/c AMuLV A.3R.1	TIB-87	AMLV transformed
mouse	BLK SV HD.2 A.5R.1 A.3	TIB-88	SV40 transformed
mouse	BALB/c AMuLV A.6R.1	TIB-90	AMLV transformed
salmon; Chinook	CHSE-214	CRL-1681	
snail	Bge	CRL-1494	
squirrel; plantain	NZP-46	CRL-1926	
zebrafish	ZF4	CRL-2050	
zebrafish	ZEM2S	CRL-2147	
Epidermis *See* Skin			
Esophagus			
goat	Ch 1 Es (NBL-8)	CCL-73	
goat	Ch1.Es	CRL-6581*	
human	Het-1A	CRL-2692	SV40 large T antigen transfected
Eye			
bovine	BCE C/D-1b	CRL-2048	cornea
Fugu rubripes (torafugu)	Fugu eye	CRL-2641	telomerase positive; sequenced
human	HCE-2	CRL-11135†	cornea; AdV12-SV40 transformed
human	B-3	CRL-11421†	lens; AdV12-SV40 transformed
human	10.014 pRSV-T	CRL-11515†	cornea

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Eye continued			
human	2.040 pRSV-T	CRL-11516†	cornea; immortalized with SV40 early region
human	ARPE-19	CRL-2302	retina, pigmented epithelium
human	ARPE-19/HPV-16	CRL-2502	retina, pigmented epithelium; HPV-16 transfected
human	hTERT RPE-1	CRL-4000	pigmented retinal epithelium; hTERT immortalized
monkey, Rhesus	RF/6A	CRL-1780	retina, choroid; fetal
rabbit	SIRC	CCL-60	cornea
rat	RPE-J	CRL-2240	retina, pigmented epithelium; SV40 transformed
Fetus *See also* Embryo			
cat	Fcwf-4	CRL-2787	whole
cat	FC60(B).We	CRL-6098*	
cat	FC61	CRL-6099*	
cat	FC70.We	CRL-6102*	
cat	FC79.We	CRL-6106*	whole
cat	FC101	CRL-6118*	whole
cat	FC102	CRL-6119*	whole
cat	FC112	CRL-6120*	whole
cat	FC113	CRL-6121*	whole
cat	FC118	CRL-6124*	
cat	FC119	CRL-6125*	whole
cat	FC60A.We	CRL-6140*	
cat	FC60B.We	CRL-6141*	
cat	FC63.Res	CRL-6143*	
cat	FC71A.We	CRL-6145*	
cat	FC104.We	CRL-6152*	
cat	FC106.We	CRL-6154*	
cat	FC107.We	CRL-6155*	
Fetus continued			
cat	FC108.We	CRL-6156*	
cat	FC109.We	CRL-6157*	
cat	FC110.We	CRL-6158*	
guinea pig	104C1	CRL-1405*	
human	Hs 2.We	CRL-7003*	
human	Hs 143.We	CRL-7092*	
human	Hs 144.We	CRL-7093*	
human	Hs 174.We	CRL-7124*	
human	Hs 216.We	CRL-7178*	
human	Hs 391.We	CRL-7267*	
human	Hs 395.We	CRL-7271*	
human	Hs 409.We	CRL-7281*	
human	Hs 410.We	CRL-7282*	
human	Hs 413.We	CRL-7286*	
human	Hs 568.We	CRL-7340*	
human	Hs 590.We	CRL-7353*	
human	HF 333.We	CRL-7706*	
human	HF 345.We	CRL-7708*	
human	HF 358.We	CRL-7709*	
human	Hs 173.We	CRL-7834*	
human	FHs 173We	HTB-158	
mouse	MBA C57.We	CRL-6370*	
rat	Rat2	CRL-1764	
Fin			
goldfish	CAR	CCL-71	
grunt, blue-striped	Grunt Fin	CCL-58	
zebrafish	SJD.1	CRL-2296	caudal
zebrafish	AB.9	CRL-2298	caudal
Foreskin *See also* Skin			
human	Hs27	CRL-1634	
human	CCD-1112Sk	CRL-2429	
human	CCD-1114Sk	CRL-2450	

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
human	BJ	CRL-2522	
human	BJ-5ta	CRL-4001	hTERT immortalized
human	CCD-1137Sk	CRL-2703	
human	Hs 18.Fs	CRL-7014*	
human	Hs 21.Fs	CRL-7015*	
human	Hs 24.Fs	CRL-7016*	
human	Hs 45.Fs	CRL-7025*	
human	Hs 46.Fs	CRL-7026*	
human	Hs 48.Fs	CRL-7027*	
human	Hs 49.Fs	CRL-7028*	
human	Hs 55.Fs	CRL-7035*	
human	Hs 56.Fs	CRL-7036*	
human	Hs 58.Fs	CRL-7038*	
human	Hs 60.Fs	CRL-7040*	
human	Hs 61.Fs	CRL-7041*	
human	Hs 62.Fs	CRL-7042*	
human	Hs 69.Fs	CRL-7047*	
human	Hs 70.Fs	CRL-7048*	
human	Hs 72.Fs	CRL-7049*	
human	Hs 77.Fs	CRL-7055*	
human	Hs 80.Fs	CRL-7058*	
human	Hs 86.Fs	CRL-7059*	
human	Hs 97.Fs	CRL-7065*	
human	Hs 137.Fs	CRL-7087*	
human	Hs 154.Fs	CRL-7098*	
human	Hs 165.Fs	CRL-7118*	
human	Hs 168.Fs	CRL-7122*	
Gill			
catfish, walking	G1B	CRL-2536	
trout, rainbow	RTgill-W1	CRL-2523	
Gingiva			
human	HGF-1	CRL-2014	
Gonadal Tissue			
rainbow trout *(Oncorhynchus mykiss)*	RTG-P1	CRL-2829	mixed testis and ovary; expresses firefly luciferase gene under control of Mx1
Heart			
bovine	FBHE	CRL-1395	vascular endothelium; fetal
iguana	IgH-2	CCL-108	
rat	H9c2(2-1)	CRL-1446	myocardium
salmon, chum	CHH-1	CRL-1680	
turtle, box	TH-1, Subline B1	CCL-50	
viper, Russell's	VH 2	CCL-140	
Intestine, Large *See* Colon			
Intestine, Small			
human	FHs 74 Int	CCL-241	
human	Hs 1.Int	CRL-7820*	
rat	IEC-18	CRL-1589	ileum
rat	IEC-6	CRL-1592	epithelium
rat	EGC/PK060399egfr	CRL-2690	jejunum, myenteric plexus; enteroglial
Kidney			
bovine	MDBK (NBL-1)	CCL-22	
bovine	FB2.K	CRL-6033*	fetal
bovine	LB10.K	CRL-6061*	
cat	CRFK	CCL-94	cortex
cat	FC5.K	CRL-6078*	
cat	FC6.K	CRL-6082*	
cat	FC115.K	CRL-6122*	
cat	FC2.K	CRL-6126*	
deer, Columbian black tail	OHH1.K	CRL-6193*	
dog	MDCK (NBL-2)	CCL-34	

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Kidney continued			
dog	DoCl$_1$ (S^+L^-)	CCL-34.1	
dog	Super Tube	CRL-2285	
dog	Super Dome	CRL-2286	
dog	DK	CRL-6247*	
hamster, Syrian golden	BHK-21 (C-13)	CCL-10	
hamster, Syrian golden	HaK	CCL-15	
hamster, Syrian golden	tk- ts13	CRL-1632	
hamster, Syrian golden	2254-62.2	CRL-8544†	
hamster, Syrian, golden	BHK21-pcDNA3.1-HC	CRL-13001†	produces recombinant human erythropoeitin
hamster, Syrian golden	BHK570	CRL-10314†	thymidine kinase deficient
human	90.74	CRL-11654†	transformed with adenovirus 5 DNA; packaging cell line
human	293 c18	CRL-10852†	high transfection frequencies
human	SODK1 [SODK1293]	CRL-12386†	transformed with adenovirus 5 DNA; packaging cell line
human	ANJOU 65	CRL-11269†	highly transfective
human	293	CRL-1573	fetal
human	HK-2	CRL-2190	cortex, proximal tubule; HPV-16 transformed
human	CCD 1103 KIDTr	CRL-2304	HPV-16 E6/E7 transformed
human	2V6.11	CRL-2784	transformed with adenovirus 5 DNA
human	GFPu-1	CRL-2794	transformed with adenovirus 5 DNA
human	PEAKrapid	CRL-2828	transformed with adenovirus 5 DNA
human	293 EcR Shh	CRL-2782	transformed with adenovirus 5 DNA
human	CCD 1105 KIDTr	CRL-2305	HPV-16 E6/E7 transformed
marmoset; black tailed	NZP-60	CRL-1924	
minipig	MPK	CCL-166	
monkey, African green	BS-C-1	CCL-26	
monkey, African green	CV-1	CCL-70	
monkey, African green	Vero	CCL-81	
monkey, African green	CV-1/EBNA-1	CRL-10478†	EBNA-1 expression
monkey, African green	PSP-36	CRL-11171†	
monkey, African green	VERO C1008	CRL-1586	
monkey, African green	VERO 76	CRL-1587	
monkey, African green	COS-1	CRL-1650	
monkey, African green	COS-7	CRL-1651	
monkey, African green	MA-104 Clone 1	CRL-2378.1	
monkey, African green	BSC40	CRL-2761	high-temperature tolerant
monkey, African green	W162	CRL-2783	supports growth of defective adenoviral deletion mutant (H2dl808)
monkey, Bolivian squirrel	SQMK-FP	CRL-2762	tubule; elevated expression of the FK506-binding immunophilin FKBP51
monkey, owl	OMK(637-69)	CRL-1556	
monkey, Rhesus	LLC-MK$_2$	CCL-7	
monkey, Rhesus	LLC-MK$_2$ derivative	CCL-7.1	
monkey, Rhesus	NCTC clone 3526	CCL-7.2	
monkey, Rhesus	FRhK-4	CRL-1688	fetal
mouse	TCMK-1	CCL-139	
mouse	SV40 MES 13	CRL-1927	glomerulus
mouse	As4.1	CRL-2193	intraparenchymal
mouse	MM54.K	CRL-6433*	
mouse	MM55.K	CRL-6436*	
mouse, transgenic	mIMCD-3	CRL-2123	medulla, collecting duct
mouse, transgenic	M-1	CRL-2038	cortex, collecting duct
opossum	OK	CRL-1840	cortex, proximal tubule
parakeet, shell	MU14.K	CRL-6485*	
peccary	Peccary.K	CRL-6488*	
pig	PK(15)	CCL-33	
pig	LLC-PK$_1$	CL-101	
pig	LLC-PK$_{1A}$	CL-101.1	
pig	ESK-4	CL-184	
pig	PK13	CRL-6489*	
pig	PK-2a/CL 13	CRL-6492*	

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
potoroo	Pt K1 (NBL-3)	CCL-35	
potoroo	PtK2 (NBL-5)	CCL-56	
potoroo	PtK1	CRL-6493*	
rabbit	LLC-RK_1	CCL-106	
rabbit	RK_{13}	CCL-37	
rabbit	vEPT	CRL-2087	proximal tubule
rabbit	Clone C	CRL-2531	cortex
rat	KNRK	CRL-1569	
rat	NRK-49F	CRL-1570	
rat	NRK-52E	CRL-1571	
rat	RK3E	CRL-1895	
rat	RMC	CRL-2573	
rat	NRK	CRL-6509*	
salmon, Atlantic	ASK	CRL-2747	may be used to propagate infectious salmon anemia virus (ISAV)
sheep	MDOK	CRL-1633	
sheep	OA4.K/S1	CRL-6549*	fetal
toad, South African clawed	A6	CCL-102	
toad, South African clawed	XLK-WG	CRL-2527	
zebra, Burchell's	NZP-36	CRL-1922	
Larva			
herring, Pacific	PHL	CRL-2750	sensitive to the cytotoxic effects of naphthalene
mosquito	Aedes aegypti	CCL-125	
mosquito	Aedes albopictus	CCL-126	
mosquito	TRA-171	CRL-1591	whole
mosquito	Aedes albopictus clone C6/36	CRL-1660	whole
moth, cabbage	IZD-MB-0503	CRL-8003†	
Liver			
deer, Columbian black tail	OHH1.Li	CRL-6194*	
human	FL 62891	CRL-11005†	immortalized with SV40 large T antigen
human	THLE-3	CRL-11233†	left lobe; immortalized with SV40 T antigen
human	THLE-2	CRL-2706	left lobe; SV40 transformed
human	Hs 399.Li	CRL-7274*	abnormal
mouse	NCTC clone 1469	CCL-9.1	
mouse	2018	CRL-10907†	stroma; immortalized with SV40 large T antigen
mouse	L.N. 4159	CRL-10998†	
mouse	NMuLi	CRL-1638	
mouse	H2.35	CRL-1995	hepatocyte; SV40 transformed
mouse	AML12	CRL-2254	
mouse	FL83B	CRL-2390	
mouse	SI/SI4	CRL-2452	stroma; fetal; SV40 large T immortalized
mouse	SI/SI4 hSCF220	CRL-2453	stroma; fetal; SV40 large T immortalized
mouse	SI/SI4 hSCF248	CRL-2454	stroma; fetal
mouse	NMu3Li	CRL-6447*	
mouse	+/+ Li	CRL-6467*	
mouse	BNL CL.2	TIB-73	embryonic
mouse	BNL SV A.8	TIB-74	SV40 transformed
mouse	BNL 1ME A.7R.1	TIB-75	chemically transformed
mouse	BNL 1NG A.2	TIB-76	chemically transformed
rat	Clone 9	CRL-1439	
rat	BRL 3A	CRL-1442	
trout, rainbow	SOB-15	CRL-2301	
zebrafish	ZFL	CRL-2643	parenchymal cells
Lung			
bat, free-tailed	Tb 1 Lu	CCL-88	
bat, free-tailed	Tb1.Lu	CRL-6564*	
cat	AK-D	CCL-150	
cat	Fc2Lu	CCL-217	
cat	FC28.Lu	CRL-6130*	fetal

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Lung continued			
cat	FC2.Lu	CRL-6569*	
cusimanse	NZP-12	CRL-1921	
deer, Columbian black tail	OHH1.Lu	CRL-6195*	
fox, grey	FoLu	CCL-168	
gerbil, Mongolian	GeLu	CCL-100	
guinea pig	JH4 clone 1	CCL-158	
hamster, Armenian	AHL-1	CCL-195	
hamster, Chinese	Don	CCL-16	
hamster, Chinese	Dede	CCL-39	
hamster, Chinese	V79-4	CCL-93	
hamster, Chinese	R 1610	CRL-1657	
hamster, Chinese	CHL/IU	CRL-1935	
hamster, Chinese	XR-V15B	CRL-2349	
human	LL 29 (AnHa)	CCL-134	idiopathic pulmonary fibrosis
human	LL 47 (MaDo)	CCL-135	
human	HEL 299	CCL-137	fetal
human	LL 24	CCL-151	
human	HFL1	CCL-153	fetal
human	MRC-5	CCL-171	
human	IMR-90	CCL-186	
human	LL 86 (LeSa)	CCL-190	
human	LL 97A (AlMy)	CCL-191	idiopathic pulmonary fibrosis
human	CCD-13Lu	CCL-200	
human	CCD-8Lu	CCL-201	
human	CCD-11Lu	CCL-202	
human	CCD-16Lu	CCL-204	
human	CCD 18Lu	CCL-205	
human	CCD-19Lu	CCL-210	
human	MRC-9	CCL-212	
human	CCD-25Lu	CCL-215	
human	WI 38	CCL-75	
human	WI-38 VA-13 subline 2RA	CCL-75.1	
human	WI-26 VA4	CCL-95.1	
human	CCD-29Lu	CRL-1478	emphysema
human	CCD-32Lu	CRL-1485	
human	CCD-33Lu	CRL-1490	
human	CCD-34Lu	CRL-1491	
human	CCD-39Lu	CRL-1498	hyaline membrane disease
human	HBE4-E6/E7	CRL-2078	bronchus
human	HBE4-E6/E7-C1	CRL-2079	bronchus
human	NL20	CRL-2503	bronchus; immortalized with SV40 large T plasmid, p129
human	NL20-TA	CRL-2504	bronchus; immortalized with SV40 large T plasmid, p129
human	C38	CRL-2779	cystic fibrosis; immortalized with Ad12-SV40 hybrid
human	HBE135-E6E7	CRL-2741	bronchus; HPV-16 E6/E7 transformed
human	IB3-1	CRL-2777	bronchus; cystic fibrosis; immortalized with Ad12-SV40 hybrid
human	S9	CRL-2778	bronchus; cystic fibrosis; immortalized with Ad12-SV40 hybrid
human	TC-1	CRL-2785	HPV-16 E6/E7 and C-Ha-ras cotransformed
human	Hs 1.Lu	CRL-7000*	
human	Hs 115.Lu	CRL-7077*	bronchus
human	Hs 218.Lu	CRL-7180*	
human	Hs 389(A).Lu	CRL-7265*	
human	Hs 389(B).Lu	CRL-7266*	
human	Hs 394.Lu	CRL-7269*	
human	Hs 397.Lu	CRL-7272*	
human	Hs 401.Lu	CRL-7275*	
human	Hs 412.Lu	CRL-7285*	bronchus
human	Hs 417.Lu	CRL-7291*	bronchus
human	Hs 573.Lu	CRL-7344*	
human	Hs 888.Lu	CRL-7624*	
human	Hs 894(E).Lu	CRL-7635*	

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Species	Cell Line Name	ATCC® No.	Description
human	Hs 907.Lu	CRL-7657*	
human	HE-LU(Rifkin)	CRL-7717*	fetal
human	Hs 468.Lu	CRL-7810*	
human	Hs 738.Lu	CRL-7868*	
human	BBM	CRL-9482†	bronchus; virus transformed
human	BZR	CRL-9483†	bronchus; virus transformed
human	BEAS-2B	CRL-9609†	bronchus; virus transformed
human	FHs 738Lu	HTB-157	
lizard, gekko	Gekko lung-1	CCL-111	
mink	Mv 1 Lu (NBL-7)	CCL-64	
mink	MiCl1 (S^+L^-)	CCL-64.1	
monkey, African green	DBS-FCL-1	CCL-161	
monkey, African green	DBS-FCL-2	CCL-162	
monkey, African green	12MBr6	CRL-1576	bronchus
monkey, Bolivian squirrel	DPSO 114/74	CCL-194	fetal
monkey, Rhesus	4MBr-5	CCL-208	bronchus
monkey, Rhesus	DBS-FRhL-2	CL-160	
mouse	MLg	CCL-206	
mouse	MH-S	CRL-2019	
mouse	MM14.Lu	CRL-6382*	bronchus
mouse	MM19.Lu	CRL-6396*	
mouse, transgenic	MLE 12	CRL-2110	
oryx, short-horned	NZP-29	CRL-1925	
rabbit	R9ab	CCL-193	fetal
rat	L2	CCL-149	
rat	RFL-6	CCL-192	
rat	RL-65	CRL-10354†	
rat	NR8383	CRL-2192	
rat	RLE-6TN	CRL-2300	
tahr	HJ2.Lu	CRL-6277*	fetal
Lymph Node			
bovine	BLn	CRL-6017*	
bovine	B2.Ln	CRL-6022*	
bovine	FB2.Ln	CRL-6034*	fetal
bovine	FB3.Ln	CRL-6038*	fetal
bovine	FB4.Ln	CRL-6041*	fetal
bovine	FB5.Ln	CRL-6044*	fetal
bovine	LBLN	CRL-6046*	
bovine	2LBLN	CRL-6047*	
bovine	3LBLN	CRL-6048*	
bovine	5LBLN	CRL-6049*	
bovine	6LBLN	CRL-6050*	
bovine	LB9.Ln	CRL-6057*	
bovine	LB10.Ln	CRL-6062*	
bovine	LB11.Ln	CRL-6066*	
bovine	R2LBLN	CRL-6070*	
cat	FC100.Ln	CRL-6117*	cervical
cat	LFC16.Ln	CRL-6173*	
dog	CLN	CRL-6245*	
human	Hs 215.Ln	CRL-7175*	mesenteric; abnormal
human	Hs 277.T	CRL-7225*	abnormal
human	Hs 325.Ln	CRL-7240*	chronic lymphadenitis
human	Hs 443.T	CRL-7300*	reactive hyperplasia
human	Hs 757.T	CRL-7490*	benign hyperplasia
human	Hs 793.T	CRL-7524*	mesenteric; hyperplasia
human	Hs 933.T	CRL-7683*	Wiskott-Aldrich syndrome
mouse	3B-11	CRL-2160	axillary; vascular epithelium; SV40 transformed
mouse	SVEC4-10EHR1	CRL-2161	axillary; vascular epithelium; SV40 transformed
mouse	IP-1B	CRL-2162	axillary; vascular epithelium; SV40 transformed
mouse	2H-11	CRL-2163	axillary; vascular epithelium; SV40 transformed
mouse	SVEC4-10EE2	CRL-2167	axillary; vascular epithelium; SV40 transformed

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Lymph Node continued			
mouse	2F-2B	CRL-2168	axillary; vascular epithelium; SV40 transformed
mouse	IP2-E4	CRL-2171	axillary; vascular epithelium; SV40 transformed
mouse	SVEC4-10	CRL-2181	axillary; vascular epithelium; SV40 transformed
turkey	MDTC-RP19	CRL-8135†	Marek's disease
Lymphoblast			
baboon, African	26CB-1	CRL-1495	spleen; HVS transformed
human	TK6	CRL-8015†	spleen; hereditary spherocytosis
human/human	T1 (174 x CEM.T1)	CRL-1991	cell hybrid
human/human	T2 (174 x CEM.T2)	CRL-1992	cell hybrid
Lymphoblast, B			
catfish, channel	1G8	CRL-2756	peripheral blood; expresses moderately increased level of p53 mRNA
catfish, channel	3B11	CRL-2757	peripheral blood; constitutively expresses telomerase
human	E.H. IV	CCL-104	peripheral blood; infectious mononucleosis
human	RPMI 7666	CCL-114	peripheral blood; EBV producing
human	RPMI 1788	CCL-156	peripheral blood; EBNA positive
human	IM-9	CCL-159	peripheral blood; EBV producing
human	MCL-5	CRL-10575†	peripheral blood; EBNA positive
human	HMy2.CIR	CRL-1993	
human	HCC1428 BL	CRL-2328	peripheral blood; EBV transformed
human	HCC1739 BL	CRL-2334	peripheral blood; EBV transformed
human	C1R-neo	CRL-2369	peripheral blood; EBV transformed
human	C1R-sB7	CRL-2370	peripheral blood; EBV transformed
human	C1R-B7	CRL-2371	peripheral blood; EBV transformed
human	NCI-BL1339	CRL-5950	peripheral blood; EBV transformed
human	NCI-BL1450	CRL-5951	peripheral blood; EBV transformed
human	NCI-BL1514	CRL-5952	peripheral blood; EBV transformed
human	NCI-BL1607	CRL-5953	peripheral blood; EBV transformed
human	NCI-BL2141	CRL-5955	peripheral blood; EBV transformed
human	NCI-BL2009	CRL-5961	peripheral blood; EBV transformed
human	NCI-BL2347	CRL-5970	peripheral blood; EBV transformed
human	AHH-1	CRL-8146†	peripheral blood; EBNA positive
human	SC-1	CRL-8756†	peripheral blood; EBV transformed
human	DAKIKI	TIB-206	peripheral blood; EBV transformed
human	SKW 6.4	TIB-215	peripheral blood; EBV transformed
monkey, Bolivian squirrel	SML, clone 4D8	CRL-2311	peripheral blood; EBV transformed
monkey, Guyanese squirrel	GSML	CRL-2699	peripheral blood; EBV transformed
monkey, owl	OML, clone 13C	CRL-2312	peripheral blood; EBV producing
Lymphocyte, T			
cat	FeT-J	CRL-11967†	peripheral blood; mononuclear cells
cat	FeT-1C	CRL-11968†	peripheral blood; mononuclear cells
cat	MYA-1	CRL-2417	peripheral blood
catfish, channel	28S.3	CRL-2758	peripheral blood
catfish, channel	G14D	CRL-2760	peripheral blood; constitutively produces interleukin-like factors
human	C5/MJ	CRL-8293†	cord blood; HTLV-1 infected
mouse	HT-2 clone A5E	CRL-1841	spleen
mouse	Cl. Ly1$^+$2$^-$/9	CRL-8179†	spleen; helper/inducer (Th-2)
mouse	CTLL-2	TIB-214	cytotoxic
mouse	D10.G4.1	TIB-224	helper/inducer
Macrophage			
catfish, channel	42TA	CRL-2759	peripheral blood
dog	DH82	CRL-10389†	histiocytosis; malignant
dog	DH82ECOK	CRL-10390†	histiocytosis; chronically infected with *Ehrlicia canis*
human (leukocyte)/ mouse (macrophage)	WBC264-9C	HB-8902†	hybrid
human	MD	CRL-9850†	spleen; monocyte
human	PMC2	CRL-9852†	spleen; monocyte
human	90196B	CRL-9853†	spleen; monocyte

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
human	EL 1	CRL-9854†	spleen; monocyte
human	SC	CRL-9855†	peripheral blood; monocyte
human	KMA	CRL-9856†	spleen; monocyte
mouse	AMJ2-C8	CRL-2455	alveolar
mouse	AMJ2-C11	CRL-2456	alveolar
mouse	RAW 264.7 γNO(–)	CRL-2278	monocyte
mouse	PMJ2-PC	CRL-2457	peritoneal; infected with J2 virus
mouse	PMJ2-R	CRL-2458	peritoneal; infected with J2 virus
mouse	I-11.15	CRL-2470	spleen
mouse	I-13.35	CRL-2471	spleen
mouse	IC-21	TIB-186	peritoneal
mouse (macrophage tumor)/mouse (peritoneal macrophage)	H36.12a	CRL-2445	hybrid
mouse (macrophage tumor)/mouse (peritoneal macrophage)	H36.12b	CRL-2446	hybrid
mouse (macrophage tumor)/mouse (peritoneal macrophage)	H36.12d	CRL-2447	hybrid
mouse (macrophage tumor)/mouse (peritoneal macrophage)	H36.12e	CRL-2448	hybrid
mouse (macrophage tumor)/mouse (peritoneal macrophage)	H36.12j	CRL-2449	hybrid
Mammary Gland			
dog	CF30.Mg	CRL-6225*	
dog	CF37.Mg	CRL-6230*	
dog	CF38.Mg	CRL-6231*	
dog	CF43.Mg	CRL-6234*	
dog	CF44.Mg	CRL-6235*	
dog	CF47.Mg	CRL-6239*	
dog	CF48.Mg	CRL-6240*	
dog	CF49.Mg	CRL-6241*	
human	MCF 10A	CRL-10317†	fibrocystic disease
human	MCF 10F	CRL-10318†	fibrocystic disease
human	MCF-10-2A	CRL-10781†	fibrocystic disease
human	MCF-12A	CRL-10782†	
human	hTERT-HME1	CRL-4010	TERT immortalized
human	MCF-12F	CRL-10783†	
human	Hs 564(E).Mg	CRL-7329*	
human	Hs 565(A).Mg	CRL-7330*	cyst
human	Hs 565(D).Mg	CRL-7333*	cyst
human	Hs 579.Mg	CRL-7347*	
human	Hs 617.Mg	CRL-7379*	
human	Hs 873.T	CRL-7610*	abnormal
human	Hs 874.T	CRL-7611*	abnormal
human	Hs 875.T	CRL-7612*	abnormal
human	Hs 877.T	CRL-7613*	abnormal
human	Hs 879(B).T	CRL-7615*	
human	Hs 880.T	CRL-7616*	abnormal
human	Hs 885.T	CRL-7618*	abnormal
human	Hs 912.T	CRL-7661*	abnormal
human	Hs 938.T	CRL-7688*	abnormal
human	SW527	CRL-7940*	Paget's disease
human	184A1	CRL-8798†	epithelium; chemically transformed
human	184B5	CRL-8799†	epithelium; chemically transformed
mouse	NMuMG	CRL-1636	
mouse	Mm5MT	CRL-1637	
mouse	MM3MG	CRL-6376*	
Mast Cell			
mouse	MC/9	CRL-8306†	liver
Mesothelium			
human	MeT-5A	CRL-9444†	virus transformed

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Mixed Tissue			
bovine	BThy	CRL-6020*	spleen and thymus
bovine	B2.Sp/Thy	CRL-6024*	spleen and thymus
bovine	FB2.Thy	CRL-6036*	spleen and thymus
bovine	FB4.Sp/Thy	CRL-6042*	spleen and thymus and fetal
bullhead, brown	BB	CCL-59	connective tissue and muscle
cat	FC83.Res	CRL-6567*	spleen, thymus and bone marrow
human	Hs 1.Sk/Mu	CRL-7001*	skin and muscle
human	Hs 103.Sp/Th	CRL-7068*	spleen and thymus
human	Hs 104.Sp/Th	CRL-7070*	spleen and thymus
human	Hs 235.Sk	CRL-7201*	skin and muscle
human	Hs 238.Sk	CRL-7203*	skin and muscle
human	Hs 394.Sk	CRL-7270*	skin and muscle
human	Hs 728.Sk/Mu	CRL-7462*	skin and muscle
human	Hs 738.St/Int	CRL-7869*	stomach and intestine
minnow; fathead	FHM	CCL-42	connective tissue and muscle
mouse	JLS-V5	CRL-6359*	spleen and thymus
mouse	JLS-V9	CRL-6360*	spleen and thymus
mouse	MM15.Sp/Thy	CRL-6388*	spleen and thymus
mouse	MM54.Sp/Thy	CRL-6434*	spleen and thymus
mouse	MM55.Sp/Thy	CRL-6437*	spleen and thymus
trout, rainbow	RTG-2	CCL-55	testis and ovary
Muscle			
human	Hs 792(C).M	CRL-7522*	connective and soft tissue
mouse	NOR-10	CCL-197	skeletal
mouse	BLO-11	CCL-198	skeletal; lysyl oxidase deficiency
mouse	G-7	CRL-1447	skeletal; fetal
mouse	G-8	CRL-1456	skeletal; fetal
mouse	C_2C_{12}	CRL-1772	
mouse	Sol8	CRL-2174	skeletal
mouse	mh	CRL-2709	Hermansky-Pudlak syndrome (HPS)
rat	L6	CRL-1458	skeletal
rat	L8	CRL-1769	skeletal
Natural Killer Cell			
human	NK-92	CRL-2407	IL-2 dependent, cytotoxic to a wide range of malignant cells
human	NK-92MI	CRL-2408	IL-2 independent, cytotoxic to a wide range of malignant cells
Ovary			
armyworm, fall	Sf9	CRL-1711	
cat	NEF26.Ov	CRL-6175*	
catfish, channel	CCO	CRL-2772	
hamster, Chinese	CHO-K1	CCL-61	
hamster, Chinese	AA8	CRL-1859	
hamster, Chinese	CHO DP-12, clone#1933 aIL8.92 NB 28605/12	CRL-12444†	expresses IgG1 (kappa) against IL-8
hamster, Chinese	CHO DP-12, clone#1934 aIL8.92 NB 28605/14	CRL-12445†	expresses IgG1 (kappa) against IL-8
hamster, Chinese	CHO-K1	CRL-9618†	
human	Hs 832(C).T	CRL-7566*	abnormal
moth	Antheraea cells, adapted	CCL-80	
mouse	B/CMBA.Ov	CRL-6331*	
mouse	MM14.Ov	CRL-6383*	
mouse	MM16.Ov	CRL-6390*	
tahr	HJ1.Ov	CRL-6274*	
Palate			
human	HEPM	CRL-1486	mesenchyme; fetal
Pancreas			
hamster, Syrian golden	HIT-T15	CRL-1777	islet of Langerhans; beta cell
mouse	MS1	CRL-2279	islet of Langerhans; endothelium
mouse	SVR	CRL-2280	islet of Langerhans; endothelium
mouse	SVR A221a	CRL-2386	islet of Langerhans; endothelium

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
mouse	SVR bag4	CRL-2387	islet of Langerhans; endothelium
mouse	MS1 VEGF	CRL-2460	islet of Langerhans; endothelium
Peritoneum			
hamster, Chinese	B14FAF28-G3	CCL-14	
hamster, Chinese	NCTC 4206	CCL-14.2	
Placenta			
cat	FC47	CRL-6094*	
human	3A(tPA-30-1)	CRL-1583	
human	3A-sub E [post crisis of 3A(tPA-30-1)]	CRL-1584	
human	Hs 726.Pl	CRL-7460*	
human	Hs 730.Pl	CRL-7464*	
human	Hs 774.Pl	CRL-7502*	
human	Hs 795.Pl	CRL-7526*	
human	Hs 798.Pl	CRL-7529*	
human	Hs 799.Pl	CRL-7530*	
human	Hs 815.Pl	CRL-7548*	
human	Hs 801.Pl	CRL-7888*	
Pleura			
rat	4/4 R.M.-4	CCL-216	visceral
Prostate			
human	RWPE-1	CRL-11609†	transfected with Ki-MSV
human	RWPE-2	CRL-11610†	transfected with HPV-18 and Ki-MSV
human	PWR-1E	CRL-11611†	immortalized with Ad12-SV40 hybrid virus
human	PZ-HPV-7	CRL-2221	epithelium; HPV-18 transformed
human	WPE1-NA22	CRL-2849	expresses androgen receptor and kallikrein 3 upon exposure to androgen
human	WPE1-NB14	CRL-2850	expresses androgen receptor and kallikrein 3 upon exposure to androgen
human	WPE1-NB11	CRL-2851	expresses androgen receptor and kallikrein 3 upon exposure to androgen
human	WPE1-NB26	CRL-2852	expresses androgen receptor and kallikrein 3 upon exposure to androgen
human	RWPE2-W99	CRL-2853	expresses androgen receptor and kallikrein 3 upon exposure to androgen
human	WPMY-1	CRL-2854	expresses androgen receptor upon exposure to androgen
rat	YPEN-1	CRL-2222	endothelium; immortalized with adenovirus 12 - SV40 virus hybrid
Rectum			
human	Hs 680.Rec	CRL-7418*	fetal
Salivary Gland			
cat	NEF36.Sg	CRL-6176*	sublingual
human	Hs 917.T	CRL-7669*	parotid; benign sebaceous cyst
Schwann Cell			
mouse	SW10	CRL-2766	immortalized with SV40 large T antigen
rat	R3 [33-10ras3]	CRL-2764	immortalized with SV40 large T antigen
rat	RSC96	CRL-2765	immortalized spontaneously
Skin *See also* Foreskin			
anteater	TAM.T	CRL-6001*	
bovine	LB9.D	CRL-6054*	dermis
camel	Dubca	CRL-2276	
cat	FC87.Sk	CRL-6150*	
horse	E. Derm (NBL-6)	CCL-57	dermis
human	Detroit 551	CCL-110	fetal
human	Detroit 548	CCL-116	
human	Detroit 573	CCL-117	
human	CCD-25Sk	CRL-1474	
human	CCD-27Sk	CRL-1475	
human	CCD-32Sk	CRL-1489	
human	CCD-34Sk	CRL-1497	

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Skin continued			
human	CCD-39Sk	CRL-1501	
human	WS1	CRL-1502	
human	CCD-43Sk	CRL-1509	
human	CCD-42Sk	CRL-1513	
human	BUD-8	CRL-1554	
human	CCD-944Sk	CRL-1836	
human	CCD-986Sk	CRL-1947	
human	CCD-1037Sk	CRL-2054	
human	CCD-1058Sk	CRL-2071	
human	CCD-1059Sk	CRL-2072	
human	CCD-1064Sk	CRL-2076	
human	CCD-1065Sk	CRL-2077	
human	CCD-1068Sk	CRL-2086	
human	CCD-1072Sk	CRL-2088	
human	CCD-1069Sk	CRL-2089	
human	CCD-1074Sk	CRL-2090	
human	CCD-1070Sk	CRL-2091	
human	CCD-1077Sk	CRL-2094	
human	CCD-1076Sk	CRL-2096	
human	CCD-1079Sk	CRL-2097	
human	CCD-1086Sk	CRL-2103	
human	CCD-1087Sk	CRL-2104	
human	CCD-1090Sk	CRL-2106	
human	CCD-1092Sk	CRL-2114	
human	CCD-1093Sk	CRL-2115	
human	CCD-1094Sk	CRL-2120	
human	CCD-1095Sk	CRL-2122	
human	CCD-1097Sk	CRL-2124	
human	CCD-1098Sk	CRL-2127	
human	CCD-1096Sk	CRL-2129	
human	CCD-1099Sk	CRL-2201	
human	CCD-1100Sk	CRL-2211	
human	CCD-1101Sk	CRL-2281	
human	CCD 1106 KERTr	CRL-2309	keratinocyte; HPV-16 E6/E7 transformed
human	CCD 1102 KERTr	CRL-2310	keratinocyte; HPV-16 E6/E7 transformed
human	CCD 1108Sk	CRL-2352	
human	CCD-1109Sk	CRL-2361	
human	HEK001	CRL-2404	keratinocyte; HPV-16 E6/E7 transformed
human	CCD-1113Sk	CRL-2439	
human	CCD-1117Sk	CRL-2465	
human	CCD-1118Sk	CRL-2466	
human	CCD-1120Sk	CRL-2510	
human	CCD-1121Sk	CRL-2511	
human	CCD-1122Sk	CRL-2513	
human	CCD-1123Sk	CRL-2524	
human	CCD-1124Sk	CRL-2529	
human	CCD-1126Sk	CRL-2564	
human	CCD-1127Sk	CRL-2565	
human	CCD-1128Sk	CRL-2566	
human	CCD-1129SK	CRL-2575	
human	CCD-1131Sk	CRL-2617	
human	CCD-1132Sk	CRL-2622	
human	CCD-1134Sk	CRL-2673	
human	CCD-1135Sk	CRL-2691	
human	CCD-1136Sk	CRL-2697	
human	CCD-1138Sk	CRL-2707	
human	CCD-1139Sk	CRL-2708	
human	CCD-1140Sk	CRL-2714	
human	CCD-1141Sk	CRL-2796	
human	Hs 3.Sk	CRL-7006*	

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
human	Hs 13.Sk	CRL-7011*	
human	Hs 112.Sk	CRL-7074*	
human	Hs 181.Sk	CRL-7129*	
human	Hs 184.Sk	CRL-7133*	
human	Hs 186.Sk	CRL-7138*	
human	Hs 201.Sk	CRL-7161*	
human	Hs 275.Sk	CRL-7223*	
human	Hs 295.Sk	CRL-7232*	
human	Hs 372.Sk	CRL-7257*	
human	Hs 392.Sk	CRL-7268*	
human	Hs 402.Sk	CRL-7276*	
human	Hs 404.Sk	CRL-7278*	
human	Hs 405.Sk	CRL-7279*	
human	Hs 415.Sk	CRL-7288*	
human	Hs 507.Sk	CRL-7307*	
human	Hs 517.Sk	CRL-7311*	
human	Hs 523.Sk	CRL-7314*	
human	Hs 531.Sk	CRL-7315*	
human	Hs 544..Sk	CRL-7317*	
human	Hs 545.Sk	CRL-7318*	
human	Hs 548.Sk	CRL-7320*	
human	Hs 556.Sk	CRL-7321*	
human	Hs 559.Sk	CRL-7323*	
human	Hs 613.Sk	CRL-7375*	
human	Hs 621.Sk	CRL-7383*	
human	Hs 622.Sk	CRL-7385*	scalp
human	Hs 674.Sk	CRL-7397*	
human	Hs 677.Sk	CRL-7406*	
human	Hs 680.Sk	CRL-7419*	
human	Hs 687.Sk	CRL-7424*	
human	Hs 696.Sk	CRL-7431*	
human	Hs 700.Sk	CRL-7439*	
human	Hs 706.Sk	CRL-7446*	
human	Hs 707(B).Ep	CRL-7449*	epidermis
human	Hs 731.Sk	CRL-7465*	
human	Hs 733.Sk	CRL-7469*	
human	Hs 734.Sk	CRL-7470*	
human	Hs 739.Sk	CRL-7476*	
human	Hs 740.Sk	CRL-7478*	
human	Hs 741.Sk	CRL-7479*	
human	Hs 749.Sk	CRL-7487*	
human	Hs 781.Sk	CRL-7510*	
human	Hs 782.Sk	CRL-7513*	
human	Hs 788.Sk	CRL-7516*	
human	Hs 793.Sk	CRL-7523*	
human	Hs 803.Sk	CRL-7533*	
human	Hs 803.T	CRL-7534*	
human	Hs 813.Sk	CRL-7545*	
human	Hs 824.Sk	CRL-7558*	
human	Hs 828.Sk	CRL-7564*	
human	Hs 833(C).Sk	CRL-7567*	
human	Hs 836.Sk	CRL-7570*	
human	Hs 844.Sk	CRL-7576*	
human	Hs 846.Sk	CRL-7578*	
human	Hs 854.Sk	CRL-7589*	
human	Hs 855.Sk	CRL-7591*	
human	Hs 864.Sk	CRL-7599*	scalp
human	Hs 865.Sk	CRL-7601*	
human	Hs 867.Sk	CRL-7603*	
human	Hs 871.Sk	CRL-7608*	
human	Hs 888.Sk	CRL-7623*	

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Skin continued			
human	Hs 898.Sk	CRL-7640*	
human	Hs 903.Sk	CRL-7648*	
human	Hs 904.Sk	CRL-7650*	
human	Hs 919.Sk	CRL-7671*	
human	Hs 924.Sk	CRL-7674*	
human	Hs 929.Sk	CRL-7681*	
human	HF 322.Sk	CRL-7703*	fetal
human	HE-SK	CRL-7718*	fetal
human	TE 90.Sk	CRL-7739*	
human	TE 91.Sk	CRL-7740*	
human	HT 297.T	CRL-7782*	actinic keratosis
human	Hs 446.Sk	CRL-7801*	
human	Hs 456.Sk	CRL-7804*	
human	Hs 456.Bt	CRL-7805*	benign lesion
human	Hs 466.Sk	CRL-7807*	scalp
human	Hs 467.Sk	CRL-7808*	
human	Hs 469.Sk	CRL-7811*	
human	Hs 483.Sk	CRL-7815*	
human	Hs 383.Sk	CRL-7842*	
human	Hs 695.Sk	CRL-7855*	
human	Hs 910.Sk	CRL-7894*	
human	Malme-3	HTB-102	
mongoose, African water	A.P.	CRL-6295*	
mouse	RT101	CRL-2002	epidermis; chemically transformed
mouse	JB6 Cl 30-7b	CRL-2007	epidermis
mouse	JB6 Cl 41-5a	CRL-2010	epidermis
mouse	$T^3$6274	CRL-2012	epidermis; chemically transformed
mouse	M. dunni (Clone III8C)	CRL-2017	
muntjac	Indian Muntjac	CCL-157	
rabbit	RAB-9	CRL-1414	
rabbit	DRS	CRL-6497*	
rabbit, cottontail	Sf1Ep	CRL-6502*	ear
rabbit, cottontail	Sf 1 Ep (NBL-11)	CCL-68	epidermis
rat	FR	CRL-1213	
Spermatocyte			
mouse	GC-2spd(ts)	CRL-2196	SV40 large T antigen transfected
Spleen			
bovine	BSp	CRL-6019*	
bovine	B2.Sp	CRL-6023*	
human	Hs 142.Sp	CRL-7090*	Down syndrome
human	Hs 173.Sp	CRL-7123*	
human	Hs 193.Sp	CRL-7148*	
human	Hs 202.Sp	CRL-7162*	
human	Hs 203.Sp	CRL-7164*	
human	Hs 204.Sp	CRL-7166*	
human	Hs 208.Sp	CRL-7169*	
human	Hs 209.Sp	CRL-7171*	
human	Hs 215.Sp	CRL-7176*	abnormal
human	Hs 221.Sp	CRL-7187*	
human	Hs 222.Sp	CRL-7189*	
human	Hs 230.Sp	CRL-7196*	
human	Hs 232.Sp	CRL-7198*	
human	Hs 697.Sp	CRL-7433*	
human	Hs 728.Sp	CRL-7463*	
human	HF 282.Sp	CRL-7701*	fetal
mouse	AKR/JA.Sp	CRL-6320*	
mouse	DBA A.Sp	CRL-6340*	
mouse	DBA C.Sp	CRL-6342*	
mouse	HR/+ A.Sp	CRL-6347*	

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Tissue Source

Species	Cell Line Name	ATCC® No.	Description
mouse	HR/+B.Sp	CRL-6348*	
mouse	HR/+ C.Sp	CRL-6349*	
mouse	HR/+ D.Sp	CRL-6350*	
mouse	HR/+ E.Sp	CRL-6351*	
mouse	HR/+ F.Sp	CRL-6352*	
mouse	HR/+ G.Sp	CRL-6353*	
mouse	HR/HR 1.Sp	CRL-6354*	
mouse	HR/HR 2.Sp	CRL-6355*	
mouse	HR/HR 3.Sp	CRL-6356*	
mouse	MM44.Sp	CRL-6419*	
mouse	MM51.Sp	CRL-6427*	
mouse	SJL/JB	CRL-6452*	
mouse	SJL/JC	CRL-6453*	
Sternum			
goose	CGBQ	CCL-169	
Synovium			
rabbit	HIG-82	CRL-1832	
Testis			
human	Hs 1.Tes	CRL-7002*	
human	Hs 181.Tes	CRL-7131*	
mouse	TM3	CRL-1714	
mouse	TM4	CRL-1715	
mouse, transgenic	15P-1	CRL-2618	Sertoli cells
mouse, transgenic	GC-1 spg	CRL-2053	spermatogonia
pig	ST	CRL-1746	
rat	Rn 5TES	CRL-6513*	
sheep	OA3.Ts	CRL-6546*	fetal
Thymus			
bovine	FB3.Thy	CRL-6039*	fetal
cat	FC56.Thy	CRL-6134*	fetal
cat	FC57.Thy	CRL-6136*	fetal
cat	FC58.Thy	CRL-6137*	fetal
cat	FC59.Thy	CRL-6139*	fetal
dog	Cf2Th	CRL-1430	
dog	CF8.Thy	CRL-6211*	
dog	CF3.Th	CRL-6575*	
human	F.thy 62891	CRL-10936	immortalized with SV40 large T antigen
human	Hs 52.Th	CRL-7032*	Down syndrome
human	Hs 142.Th	CRL-7091*	Down syndrome
human	Hs 202.Th	CRL-7163*	
human	Hs 203.Th	CRL-7165*	
human	Hs 208.Th	CRL-7170*	
human	Hs 215.Th	CRL-7177*	abnormal
human	Hs 220.Th	CRL-7186*	
human	Hs 221.Th	CRL-7188*	
human	Hs 225.Th	CRL-7191*	
human	Hs 230.Th	CRL-7195*	
human	Hs 232.Th	CRL-7197*	
human	Hs 234.Th	CRL-7200*	
human	Hs 910.Thm	CRL-7660*	
human	TE 199.T	CRL-7757*	thymic alymphoplasia
human	Hs 67.Th	CRL-7828*	
human	Hs 67	HTB-163	
Thyroid			
rat	FRTL	CRL-1468	
Tongue			
bullfrog	FT	CCL-41	
cat	Fc3Tg	CCL-176	
human	Hs 677.Tg	CRL-7408*	
human	Hs 680.Tg	CRL-7421*	

* Part of the NBL collection; see page 12. † Patent item; see page 12.

Tissue Source

Species	Cell Line Name	ATCC® No.	Description
Tonsil			
human	Hs 198.Ton	CRL-7156*	
Trachea			
armadillo, nine-banded	DNI.Tr	CRL-6009*	
bovine	EBTr (NBL-4)	CCL-44	
cat	FC114E.Tr	CRL-6167*	fetal
dog	CF46.Tr	CRL-6238*	
dog	CF52.Tr	CRL-6244*	
human	Hs 680.Tr	CRL-7422*	
Trunk			
bluegill	BF-2	CCL-91	caudal
Turbinate			
bovine	BT	CRL-1390	
pig	PT-K75	CRL-2528	nasal; mucosa
Unknown			
bovine	MBC(5)	CRL-6069*	
cat	F8	CRL-6074*	
cat	FNS	CRL-6170*	
cat	FO-4	CRL-6171*	
chicken	Gd1T	CRL-6180*	
chicken	RFGd10WE	CRL-6190*	possibly whole embryo
chicken	RFGd11WE	CRL-6191*	possibly whole embryo
chicken	RFGd12WE	CRL-6192*	possibly whole embryo
dog	CF28	CRL-6223*	
goat	Ch2.D	CRL-6270*	possibly skin
horse	Horse	CRL-6583*	
human	TE 98.T	CRL-7741*	histiocytosis
human	Hs 914	CRL-7895*	
human	Hs 915	CRL-7896*	
human	Hs 916	CRL-7897*	
human	80T	CRL-7901*	
mouse	McCoy	CRL-1696	
mouse	Mouse	CRL-6440*	
mouse	AL/N	CRL-6506*	
mouse	T-AL/N	CRL-6514*	
pig	PK(D1)	CRL-6490*	
rat	AVE-115	CRL-6507*	
rat	RATV-NRK	CRL-6510*	possibly kidney
rat	UVE-10	CRL-6515*	
talapoin	MT1.K	CRL-6309*	possibly kidney
Ureter			
human	MC-SV-HUC T-2	CRL-9519†	uroepithelium
human	SV-HUC-1	CRL-9520†	uroepithelium
Uterus			
bovine	BEND	CRL-2398	endometrium
mink	GMMe [EPI]	CRL-2674	endometrium
mink	GMMs [STR]	CRL-2675	endometrium
raccoon	P1 1Ut (NBL-9)	CCL-74	
Vagina			
human	VK2/E6E7	CRL-2616	mucosa; HPV-16 E6/E7 transformed
Vein			
human	HUV-EC-C	CRL-1730	umbilical; vascular endothelium
human	HIVE-78	CRL-2476	iliac
human	HUVE-12	CRL-2480	umbilical
human	HUVS-112D	CRL-2481	umbilical; smooth muscle
human	HIVS-125	CRL-2482	iliac; smooth muscle
human	HIVE-26	CRL-2603	iliac
human	HIVE-65	CRL-2605	iliac
human	HPVE-26	CRL-2607	pulmonary
human	HIVE-55	CRL-2609	iliac

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Species Other Than Human, Mouse and Rat

The ATCC Cell Biology Collection includes a broad range of species. This index lists cells from species other than human, mouse, and rat. Most of these cell lines are from the NBL collection, which is described on page 12. For more information on a cell line, see the main list starting on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Species	Description	Name	ATCC® No.
anteater	skin	TAM.T	CRL-6001*
armadillo, nine-banded	trachea	DNI.Tr	CRL-6009*
armyworm, fall	ovary	Sf9	CRL-1711
baboon, African	spleen, lymphoblast; HVS transformed	26CB-1	CRL-1495
bass, white *(Morone chrysops)*	embryo	WBE	CRL-2773
bat, free-tailed	lung	Tb 1 Lu	CCL-88
bat, free-tailed	lung	Tb1.Lu	CRL-6564*
bat, mouse-eared	interscapular tumor, possibly basal cell	Mvi/It	CRL-6012*
bluegill	caudal trunk	BF-2	CCL-91
bovine	adrenal gland; capillary endothelium	EJG	CRL-8659†
bovine	adrenal gland (cortex); zona fasciculata, zona reticularis	SBAC	CRL-1796
bovine	artery, pulmonary; vascular endothelium	CPAE	CCL-209
bovine	artery, pulmonary; vascular endothelium	CPA 47	CRL-1733
bovine	B lymphocyte; lymphosarcoma	BL3.1	CRL-2306
bovine	bone marrow	BBm	CRL-6016*
bovine	bone marrow, fetal	FB5.Bm	CRL-6043*
bovine	bone marrow; lymphosarcoma	LB9.Bm	CRL-6053*
bovine	bone marrow; lymphosarcoma	LB10.Bm	CRL-6060*
bovine	eye (cornea)	BCE C/D-1b	CRL-2048
bovine	heart, vascular endothelium; fetal	FBHE	CRL-1395
bovine	kidney	MDBK (NBL-1)	CCL-22
bovine	kidney	LB10.K	CRL-6061*
bovine	kidney, fetal	FB2.K	CRL-6033*
bovine	lymph node	BLn	CRL-6017*
bovine	lymph node	B2.Ln	CRL-6022*
bovine	lymph node	LBLN	CRL-6046*
bovine	lymph node	2LBLN	CRL-6047*
bovine	lymph node	3LBLN	CRL-6048*
bovine	lymph node	5LBLN	CRL-6049*
bovine	lymph node	6LBLN	CRL-6050*
bovine	lymph node	LB9.Ln	CRL-6057*
bovine	lymph node	LB10.Ln	CRL-6062*
bovine	lymph node	LB11.Ln	CRL-6066*
bovine	lymph node	R2LBLN	CRL-6070*
bovine	lymph node, fetal	FB2.Ln	CRL-6034*
bovine	lymph node, fetal	FB3.Ln	CRL-6038*
bovine	lymph node, fetal	FB4.Ln	CRL-6041*
bovine	lymph node, fetal	FB5.Ln	CRL-6044*
bovine	lymph node; leukemia	2FLB.Ln	CRL-6045*
bovine	lymphosarcoma; leukemia	BL-3	CRL-8037*
bovine	mixed spleen and thymus	BThy	CRL-6020*
bovine	mixed spleen and thymus	B2.Sp/Thy	CRL-6024*

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Species Other Than Human, Mouse and Rat

Species	Description	Name	ATCC® No.
bovine	mixed spleen and thymus	FB2.Thy	CRL-6036*
bovine	mixed spleen, thymus, and bone marrow; lymphosarcoma	LB9.Sp/Thy/Bm	CRL-6052*
bovine	mixed spleen and thymus, fetal	FB4.Sp/Thy	CRL-6042*
bovine	skin, dermis	LB9.D	CRL-6054*
bovine	spleen	BSp	CRL-6019*
bovine	spleen	B2.Sp	CRL-6023*
bovine	spleen; lymphosarcoma	LB9.Sp	CRL-6058*
bovine	spleen; lymphosarcoma	LB10.Sp	CRL-6063*
bovine	spleen; lymphosarcoma	LB11.Sp	CRL-6067*
bovine	thymus, fetal	FB3.Thy	CRL-6039*
bovine	thymus; lymphosarcoma	LB9.Thy	CRL-6059*
bovine	thymus; lymphosarcoma	LB10.Thy	CRL-6064*
bovine	thymus; lymphosarcoma	LB11.Thy	CRL-6068*
bovine	trachea	EBTr (NBL-4)	CCL-44
bovine	turbinate	BT	CRL-1390
bovine	unknown	MBC(5)	CRL-6069*
bovine	uterus, endometrium	BEND	CRL-2398
bullfrog	tongue	FT	CCL-41
bullhead, brown	mixed connective tissue and muscle	BB	CCL-59
camel	skin	Dubca	CRL-2276
cat	bone marrow	FC6.Bm	CRL-6081*
cat	bone marrow; erythroleukemia	F25	CRL-6566*
cat	bone marrow; reticulum cell sarcoma	FC11.BM	CRL-6088*
cat	brain, astrocyte	G355-5	CRL-2033
cat	brain, astrocyte; Mo-MSV transformed	PG-4 (S^+L^-)	CRL-2032
cat	connective tissue; fibrosarcoma	FC77.T	CRL-6105*
cat	connective tissue; fibrosarcoma	FC81.T	CRL-6108*
cat	connective tissue; fibrosarcoma	FC94.T	CRL-6113*
cat	connective tissue; sarcoma	FC100.T	CRL-6115*
cat	embryo	NCE-F161	CRL-8727†
cat	embryo, whole	OSU1	CRL-6178*
cat	embryo, whole	FC60(A).We	CRL-6571*
cat	fetus	FC60(B).We	CRL-6098*
cat	fetus	FC61	CRL-6099*
cat	fetus	FC70.We	CRL-6102*
cat	fetus	FC118	CRL-6124*
cat	fetus	FC60A.We	CRL-6140*
cat	fetus	FC60B.We	CRL-6141*
cat	fetus	FC63.Res	CRL-6143*
cat	fetus	FC71A.We	CRL-6145*
cat	fetus	FC104.We	CRL-6152*
cat	fetus	FC106.We	CRL-6154*
cat	fetus	FC107.We	CRL-6155*
cat	fetus	FC108.We	CRL-6156*
cat	fetus	FC109.We	CRL-6157*
cat	fetus	FC110.We	CRL-6158*
cat	fetus, whole	FC79.We	CRL-6106*
cat	fetus, whole	FC101	CRL-6118*
cat	fetus, whole	FC102	CRL-6119*
cat	fetus, whole	FC112	CRL-6120*
cat	fetus, whole	FC113	CRL-6121*
cat	fetus, whole	FC119	CRL-6125*
cat	whole fetus; macrophage	Fcwf-4	CRL-2787
cat	kidney	FC5.K	CRL-6078*
cat	kidney	FC6.K	CRL-6082*
cat	kidney	FC115.K	CRL-6122*
cat	kidney	FC2.K	CRL-6126*
cat	kidney (cortex)	CRFK	CCL-94
cat	lung	AK-D	CCL-150
cat	lung	Fc2Lu	CCL-217

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Species	Description	Name	ATCC® No.
cat	lung	FC2.Lu	CRL-6569*
cat	lung, fetal	FC28.Lu	CRL-6130*
cat	lymph node	LFC16.Ln	CRL-6173*
cat	lymph node, cervical	FC100.Ln	CRL-6117*
cat	lymph node, submandibular; lymphoma	F_1B	CRL-6168*
cat	lymphoblast; lymphoma	FL74-UCD-1	CRL-8012†
cat	lymphoma	FeLV-3281	CRL-9116†
cat	mixed spleen, thymus, and bone marrow	FC83.Res	CRL-6567*
cat	ovary	NEF26.Ov	CRL-6175*
cat	peripheral blood mononuclear cells, T lymphocytes	FeT-J	CRL-11967†
cat	peripheral blood mononuclear cells, T lymphocytes	FeT-1C	CRL-11968†
cat	peripheral blood, T lymphoblast	MYA-1	CRL-2417
cat	placenta	FC47	CRL-6094*
cat	salivary gland, sublingual	NEF36.Sg	CRL-6176*
cat	skin	FC87.Sk	CRL-6150*
cat	spleen; fibrosarcoma	FC81.Sp	CRL-6107*
cat	spleen; fibrosarcoma	FC83.Sp	CRL-6110*
cat	spleen; lymphoma	FC16.Sp	CRL-6174*
cat	spleen; sarcoma	FC100.Sp	CRL-6116*
cat	thymus, fetal	FC56.Thy	CRL-6134*
cat	thymus, fetal	FC57.Thy	CRL-6136*
cat	thymus, fetal	FC58.Thy	CRL-6137*
cat	thymus, fetal	FC59.Thy	CRL-6139*
cat	thymus; fibrosarcoma	FC81.Thy	CRL-6109*
cat	thymus; osteosarcoma	FC95.Thy	CRL-6114*
cat	tongue	Fc3Tg	CCL-176
cat	trachea, fetal	FC114E.Tr	CRL-6167*
cat	unknown	F8	CRL-6074*
cat	unknown	FNS	CRL-6170*
cat	unknown	FO-4	CRL-6171*
catfish, channel *(Ictalurus punctatus)*	ovary	CCO	CRL-2772
catfish, channel *(Ictalurus punctatus)*	peripheral blood, T lymphocyte	G14D	CRL-2760
catfish, channel *(Ictalurus punctatus)*	peripheral blood, B lymphoblast	1G8	CRL-2756
catfish, channel *(Ictalurus punctatus)*	peripheral blood, B lymphoblast	3B11	CRL-2757
catfish, channel *(Ictalurus punctatus)*	peripheral blood, macrophage	42TA	CRL-2759
catfish, channel *(Ictalurus punctatus)*	peripheral blood, T lymphoblast	28S.3	CRL-2758
catfish, walking	gill	G1B	CRL-2536
chicken	bursa; lymphoma	DT40	CRL-2111
chicken	bursa; lymphoma	DT95	CRL-2112
chicken	embryo	UMNSAH/DF-1	CRL-12203†
chicken	embryo	SL-29	CRL-1590
chicken	embryo	Gd1WE	CRL-6181*
chicken	embryo	RFGd2WE	CRL-6182*
chicken	embryo	RFGd3WE	CRL-6183*
chicken	embryo	RFGd4WE	CRL-6184*
chicken	embryo	RFGd5WE	CRL-6185*
chicken	liver; hepatocellular carcinoma	LMH	CRL-2117
chicken	liver; hepatocellular carcinoma	LMH/2A	CRL-2118
chicken	spleen, T lymphocyte; transformed with REV-T; produces G-CSF	ConA-C1-VICK	CRL-12135†
chicken	spleen, T lymphocyte; transformed with REV-T; produces G-CSF	ConA-B1-VICK	CRL-12357†
chicken	unknown	Gd1T	CRL-6180*
chicken	unknown, possibly whole embryo	RFGd10WE	CRL-6190*
chicken	unknown, possibly whole embryo	RFGd11WE	CRL-6191*

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See the ATCC online catalogue for the complete description of a cell line.

Species Other Than Human, Mouse and Rat

Species	Description	Name	ATCC® No.
chicken	unknown, possibly whole embryo	RFGd12WE	CRL-6192*
crayfish	brain, cerebral ganglion	OLGA-PH-J/92	CRL-2576
cusimanse	lung	NZP-12	CRL-1921
deer, Columbian black tail	kidney	OHH1.K	CRL-6193*
deer, Columbian black tail	liver	OHH1.Li	CRL-6194*
deer, Columbian black tail	lung	OHH1.Lu	CRL-6195*
dog	bone, connective tissue; osteosarcoma	CF11.T	CRL-6217*
dog	bone; osteosarcoma	D17	CRL-6248*
dog	bone; osteosarcoma	D22	CRL-6250*
dog	bone; osteosarcoma	D17	CRL-8468†
dog	connective tissue; cancer	CF17.T	CRL-6219*
dog	connective tissue; cancer	CF21.T	CRL-6220*
dog	connective tissue; cancer	CF24.T	CRL-6221*
dog	kidney	MDCK (NBL-2)	CCL-34
dog	kidney	DoCl1 (S^+L^-)	CCL-34.1
dog	kidney	Super Tube	CRL-2285
dog	kidney	Super Dome	CRL-2286
dog	lung; osteosarcoma	D-17	CCL-183
dog	lymph node	CLN	CRL-6245*
dog	macrophage; histiocytosis; malignant	DH82	CRL-10389†
dog	macrophage; histiocytosis; malignant	DH82ECOK	CRL-10390†
dog	mammary gland	CF30.Mg	CRL-6225*
dog	mammary gland	CF37.Mg	CRL-6230*
dog	mammary gland	CF38.Mg	CRL-6231*
dog	mammary gland	CF43.Mg	CRL-6234*
dog	mammary gland	CF44.Mg	CRL-6235*
dog	mammary gland	CF47.Mg	CRL-6239*
dog	mammary gland	CF48.Mg	CRL-6240*
dog	mammary gland	CF49.Mg	CRL-6241*
dog	mammary gland, cancer	CF33.MT	CRL-6227*
dog	mammary gland, cancer	CF34.Mg	CRL-6228*
dog	mammary gland, cancer	CF35.Mg	CRL-6229*
dog	mammary gland, cancer	CF41.Mg	CRL-6232*
dog	mammary gland, cancer	CF45B.Mg	CRL-6237*
dog	osteosarcoma; amphotropic retroviral packaging line	DAN	CRL-2130
dog	osteosarcoma; produces SNV helper virus	DSN	CRL-9939†
dog	osteosarcoma; retroviral packaging line	DSDh	CRL-2131
dog	thymus	Cf2Th	CRL-1430
dog	thymus	CF8.Thy	CRL-6211*
dog	thymus	CF3.Th	CRL-6575*
dog	trachea	CF46.Tr	CRL-6238*
dog	trachea	CF52.Tr	CRL-6244*
dog	unknown	CF28	CRL-6223*
dog	unknown; tumor	A-72	CRL-1542
Drosophila	embryo	Schneider's Drosophila Line 2	CRL-1963
Drosophila	embryo; overproduces P element transposase	L-2/M Δ2-3	CRL-10191†
duck, Pekin	embryo	Duck embryo	CCL-141
ferret	brain	Mpf	CRL-1656
fox, grey	lung	FoLu	CCL-168
frog, grass	embryo; androgenetic haploid	ICR-2A	CCL-145
frog, grass	embryo; gynogenetic haploid	ICR 134	CCL-128
gerbil, Mongolian	connective tissue; fibroma	IMR-33	CCL-146
gerbil, Mongolian	lung	GeLu	CCL-100
goat	esophagus	Ch 1 Es (NBL-8)	CCL-73
goat	esophagus	Ch1.Es	CRL-6581*
goat	unknown, possibly skin	Ch2.D	CRL-6270*
goldfish	fin	CAR	CCL-71
goose	sternum	CGBQ	CCL-169
guinea pig	colon; colorectal adenocarcinoma	GPC-16	CCL-242
guinea pig	fetus	104C1	CRL-1405

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Species Other Than Human, Mouse and Rat

Species	Description	Name	ATCC® No.
guinea pig	lung	JH4 clone 1	CCL-158
hamster, Armenian	lung	AHL-1	CCL-195
hamster, Chinese	lung	Don	CCL-16
hamster, Chinese	lung	Dede	CCL-39
hamster, Chinese	lung	V79-4	CCL-93
hamster, Chinese	lung	R 1610	CRL-1657
hamster, Chinese	lung	CHL/IU	CRL-1935
hamster, Chinese	lung	XR-V15B	CRL-2349
hamster, Chinese	ovary	CHO-K1	CCL-61
hamster, Chinese	ovary	AA8	CRL-1859
hamster, Chinese	ovary; dihydrofolate reductase deficient	CHO/dhFr$^-$	CRL-9096†
hamster, Chinese	ovary; expresses IgG1 (kappa) against IL-8	CHO DP-12, clone#1933 aIL8.92 NB 28605/12	CRL-12444†
hamster, Chinese	ovary; expresses IgG1 (kappa) against IL-8	CHO DP-12, clone#1934 aIL8.92 NB 28605/14	CRL-12445†
hamster, Chinese	peritoneum	B14FAF28-G3	CCL-14
hamster, Chinese	peritoneum	NCTC 4206	CCL-14.2
hamster, Chinese	somatic cell hybrid; mouse chromosome 8	MC2/3	CRL-2143
hamster, Syrian golden	BHK-21 transformed and expressing human erythropoietin	BHK21-pcDNA3.1-HC	CRL-13001†
hamster, Syrian golden	ductus deferens, smooth muscle; leiomyosarcoma	DDT$_1$ MF-2	CRL-1701
hamster, Syrian golden	kidney	BHK-21 (C-13)	CCL-10
hamster, Syrian golden	kidney	HaK	CCL-15
hamster, Syrian golden	kidney	tk$^-$ ts13	CRL-1632
hamster, Syrian golden	kidney	2254-62.2	CRL-8544†
hamster, Syrian golden	kidney	BHK570	CRL-10314†
hamster, Syrian golden	kidney; produces recombinant human erythropoeitin	BHK21-pcDNA3.1-HC	CRL-13001†
hamster, Syrian golden	pancreas (islet of Langerhans); beta cell	HIT-T15	CRL-1777
hamster, Syrian golden	skin; melanotic melanoma	RPMI 1846	CCL-49
hamster, Syrian golden	tumor, adenovirus 12 induced; transfection host; exogenous gene expression	MCB3901	CRL-9595†
herring, Pacific (*Clupea pallasi*)	larvae	PHL	CRL-2750
horse	skin, dermis	E. Derm (NBL-6)	CCL-57
horse	unknown	Horse	CRL-6583*
iguana	heart	IgH-2	CCL-108
kusafugu *(Fugu niphobles)*	whole fry	Fugu fry	CRL-2642
lizard, gekko	lung	Gekko lung-1	CCL-111
marmoset	colon; adenocarcinoma	TAC-1	CRL-10632†
marmoset, black tailed	kidney	NZP-60	CRL-1924
minipig	kidney	MPK	CCL-166
mink	lung	Mv 1 Lu (NBL-7)	CCL-64
mink	lung	MiCl1 (S$^+$L$^-$)	CCL-64.1
mink	uterus, endometrium	GMMe [EPI]	CRL-2674
mink	uterus, endometrium	GMMs [STR]	CRL-2675
minnow, fathead	mixed connective tissue and muscle	FHM	CCL-42
mongoose, African water	skin	A.P.	CRL-6295*
monkey, African green	kidney	BS-C-1	CCL-26
monkey, African green	kidney	CV-1	CCL-70
monkey, African green	kidney	Vero	CCL-81
monkey, African green	kidney	PSP-36	CRL-11171†
monkey, African green	kidney	VERO C1008	CRL-1586
monkey, African green	kidney	VERO 76	CRL-1587
monkey, African green	kidney	COS-1	CRL-1650
monkey, African green	kidney	COS-7	CRL-1651
monkey, African green	kidney	MA-104 Clone 1	CRL-2378.1
monkey, African green	kidney	BSC40	CRL-2761
monkey, African green	kidney	W162	CRL-2783
monkey, African green	kidney; EBNA-1 expression	CV-1/EBNA-1	CRL-10478†
monkey, African green	lung	DBS-FCL-1	CCL-161
monkey, African green	lung	DBS-FCL-2	CCL-162
monkey, African green	lung (bronchus)	12MBr6	CRL-1576

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Species Other Than Human, Mouse and Rat

Species	Description	Name	ATCC® No.
monkey, Bolivian squirrel	kidney, tubule	SQMK-FP	CRL-2762
monkey, Bolivian squirrel	lung, fetal	DPSO 114/74	CCL-194
monkey, Bolivian squirrel	peripheral blood; B lymphoblast; EBV transformed	SML, clone 4D8	CRL-2311
monkey, Guyanese squirrel	peripheral blood; B lymphoblast; EBV transformed	GSML	CRL-2699
monkey, owl	kidney	OMK(637-69)	CRL-1556
monkey, owl	peripheral blood; B lymphoblast; EBV transformed	OML, clone 13C	CRL-2312
monkey, Rhesus	B lymphocyte; lymphoma	LCL 8664	CRL-1805
monkey, Rhesus	eye (retina, choroid), fetal	RF/6A	CRL-1780
monkey, Rhesus	kidney	LLC-MK_2	CCL-7
monkey, Rhesus	kidney	LLC-MK_2	CCL-7.1
monkey, Rhesus	kidney	NCTC clone 3526	CCL-7.2
monkey, Rhesus	kidney, fetal	FRhK-4	CRL-1688
monkey, Rhesus	lung	DBS-FRhL-2	CL-160
monkey, Rhesus	lung (bronchus)	4MBr-5	CCL-208
monkey, Rhesus	mammary gland; cancer	CMMT	CRL-6299*
mosquito	larva	Aedes aegypti	CCL-125
mosquito	larva	Aedes albopictus	CCL-126
mosquito	larva, whole	TRA-171	CRL-1591
mosquito	larva, whole	Aedes albopictus cloneC6/36	CRL-1660
moth	ovary	Antheraea cells, adapted	CCL-80
moth, cabbage	larva	IZD-MB-0503	CRL-8003†
muntjac	skin	Indian Muntjac	CCL-157
opossum	kidney (cortex, proximal tubule)	OK	CRL-1840
oryx, short-horned	lung	NZP-29	CRL-1925
parakeet, shell	kidney	MU14.K	CRL-6485*
peccary	kidney	Peccary.K	CRL-6488*
pig	kidney	PK(15)	CCL-33
pig	kidney	LLC-PK_1	CL-101
pig	kidney	LLC-PK_{1A}	CL-101.1
pig	kidney	ESK-4	CL-184
pig	kidney	PK13	CRL-6489*
pig	kidney	PK-2a/CL 13	CRL-6492*
pig	testis	ST	CRL-1746
pig	turbinate, nasal; mucosa	PT-K75	CRL-2528
pig	unknown	PK(D1)	CRL-6490*
potoroo	kidney	Pt K1 (NBL-3)	CCL-35
potoroo	kidney	PtK2 (NBL-5)	CCL-56
potoroo	kidney	PtK1	CRL-6493*
quail, Japanese	fibrosarcoma	QT6	CRL-1708
quail, Japanese	muscle; chemically induced fibrosarcoma	QM7	CRL-1962
quail, Japanese	neuroretina	QNR/D	CRL-2532
quail, Japanese	neuroretina	QNR/K2	CRL-2533
rabbit	eye, cornea	SIRC	CCL-60
rabbit	kidney	LLC-RK_1	CCL-106
rabbit	kidney	RK_{13}	CCL-37
rabbit	kidney (cortex, proximal tubule)	Clone C	CRL-2531
rabbit	kidney (proximal tubule)	vEPT	CRL-2087
rabbit	lung, fetal	R9ab	CCL-193
rabbit	skin	RAB-9	CRL-1414
rabbit	skin	DRS	CRL-6497*
rabbit	skin (ear)	Sf1Ep	CRL-6502*
rabbit	synovium	HIG-82	CRL-1832
rabbit	unknown; papilloma virus-induced carcinoma	VX7	CRL-6504*
rabbit, cottontail	skin, epidermis	Sf 1 Ep (NBL-11)	CCL-68
rabbit, cottontail	skin; papilloma	CTPS	CRL-6496*
raccoon	uterus	P1 1Ut (NBL-9)	CCL-74
salmon, Atlantic *(Salmo salar)*	kidney	ASK	CRL-2747
salmon, chum	heart	CHH-1	CRL-1680
salmon, Chinook	embryo	CHSE-214	CRL-1681
sheep	bone marrow, fetal	OA4.Bm	CRL-6547*

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Species Other Than Human, Mouse and Rat

Species	Description	Name	ATCC® No.
sheep	brain	OA1	CRL-6538*
sheep	brain, choroid plexus	SCP	CRL-1700
sheep	kidney	MDOK	CRL-1633
sheep	kidney, fetal	OA4.K/S1	CRL-6549*
sheep	testis, fetal	OA3.Ts	CRL-6546*
silkworm	unknown	BM-N	CRL-8910†
snail	embryo	Bge	CRL-1494
squirrel, plantain	embryo	NZP-46	CRL-1926
tahr	lung, fetal	HJ2.Lu	CRL-6277*
tahr	ovary	HJ1.Ov	CRL-6274*
talapoin	unknown; possibly kidney	MT1.K	CRL-6309*
toad, South African clawed	kidney	A6	CCL-102
toad, South African clawed	kidney	XLK-WG	CRL-2527
toad, tropical	urinary bladder	TBM-54	CRL-2051
topminnow	liver; hepatocellular carcinoma	PLHC-1	CRL-2406
torafugu *(Fugu rubripes)*	eye	Fugu eye	CRL-2641
trout, rainbow	gill	RTgill-W1	CRL-2523
trout, rainbow	gonadal tissue	RTG-P1	CRL-2829
trout, rainbow	liver	SOB-15	CRL-2301
trout, rainbow	liver; hepatoma	RTH-149	CRL-1710
trout, rainbow	mixed testis and ovary	RTG-2	CCL-55
turkey	lymph node; Marek's disease	MDTC-RP19	CRL-8135†
turtle, box	heart	TH-1, Subline B1	CCL-50
viper, Russell's	heart	VH 2	CCL-140
viper, Russell's	spleen; tumor, unknown primary	VSW	CCL-129
woodchuck, Eastern	liver; hepatoma	WCH-17	CRL-2082
zebra, Burchell's	kidney	NZP-36	CRL-1922
zebrafish	embryo	ZF4	CRL-2050
zebrafish	embryo	ZEM2S	CRL-2147
zebrafish	fin, caudal	SJD.1	CRL-2296
zebrafish	fin, caudal	AB.9	CRL-2298
zebrafish	liver, parenchymal cells	ZFL	CRL-2643

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Hybridomas by Antigenic Determinant

There are approximately 1,000 hybridomas in the ATCC Cell Biology Collection. They are listed by the antigenic determinant recognized by their expressed monoclonal antibodies. For more information on a hybridoma, see the main list on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Abelson murine leukemia virus, 16-kDa antigen	rat/mouse	IgG2a	CDR1	HB-213
abl oncogene peptide, synthetic	mouse	IgG1 and IgG2b	310-29F7	CRL-2656
abl oncogene peptide, synthetic	mouse	IgG1 and IgG2b	311-3D4	CRL-2657
abl oncogene peptide, synthetic	mouse	IgG1	312-13E8	CRL-2658
Acetylcholine receptor (AChR) alpha subunit	rat	IgG2a	mAb64	HB-8987†
Acetylcholine receptor (AChR) alpha subunit	rat/mouse	IgG1	mAb 35	HB-8857†
Acetylcholine receptor (AChR) alpha subunit	rat/mouse	IgG1	mAb35	TIB-175
Acetylcholine receptor, neuronal, chicken	rat/mouse	IgG2a	mAb 270	HB-189
Acetylcholine receptor, neuronal, rat	rat/mouse	IgG2a	mAb 270	HB-189
Acetylcholinesterase, human	mouse	IgG1	AE-1	HB-72
Acetylcholinesterase, human	mouse	IgG1	AE-2	HB-73
Acid phosphatase, prostatic (PAP), human	mouse	IgG1	RLTM01	HB-8526†
Acid phosphatase, prostatic (PAP), human	mouse	IgG1	RLTM02	HB-8523†
Actin	mouse	IgG1	ACT I	HB-80
Actin	mouse	IgG1	ACT IV	HB-81
Actinin, alpha	mouse	IgM	G-3-5	CRL-2252
Addressin, mucosal vascular, mouse	rat/mouse	IgG2a	MECA-89	HB-292
Addressin, peripheral node, mouse	rat/mouse	IgM	MECA-79	HB-9479†
Adenocarcinoma, colon, human	mouse	IgG1	CLT 85	HB-8240†
Adenocarcinoma, colon, human	mouse	IgG3	HT 29/36	HB-8248†
Adenovirus group-specific antigen	mouse	IgG2a	2Hx-2	HB-8117†
Agrobacterium tumefaciens biovar 3	mouse	IgG1	F21-1D3G7C8	HB-9463†
Aldosterone	mouse	IgG1	A2E11	CRL-1846
Alpha fetoprotein (AFP), human	mouse	IgG1; kappa	OM 3-1.1	HB-134
Alpha-1,3-dextran	mouse	IgA; lambda	J558	TIB-6
Alveolar surfactant protein (ASP)	mouse	IgG	DS-1	HB-8906†
Alveolar surfactant protein (ASP)	mouse	IgG1	DS-3	HB-8651†
Alveolar surfactant protein (ASP)	mouse	IgG1	DS-5	HB-8653†
Alveolar surfactant protein (ASP)	mouse	IgG1	DS-6	HB-8652†
Amylase, salivary, human	mouse	IgG2a	110-5	HB-8984†
Angiotensin-converting enzyme (ACE)	mouse	IgM	α-ACE 3.1.1	HB-8191†
Annexin I, human	mouse	IgG1	EH17a	CRL-2209
Annexin I, human	mouse	IgG1	EH7a	CRL-2194
Annexin II, human	mouse	IgG1	EH7a	CRL-2194
Antigen-dependent killer (K) cells, human	mouse	IgM; kappa	HNK-1	TIB-200
AP-2 adaptor protein of clathrin coated vesicles	mouse	IgG1	AP.6	CRL-2227
Apolipoprotein A-I (Apo-A-I), human	mouse	IgG1	A5.4	CRL-2275
Apolipoprotein E (ApoE), human	mouse	IgG1	WU E-14	CRL-2255
Apolipoprotein E (ApoE), human	mouse	IgG1	WU E-4	CRL-2247
Asialo GM1	mouse	IgM	SH-34	CRL-2405
Asialo GM2	mouse	IgM	2D4	TIB-185
Astrocyte protein, human	mouse	IgM	J1-31	CRL-2253
Astrocyte, rat	mouse	IgG2a	RAN-2	TIB-119
Astrocytoma cell line, human	mouse	IgG2a	G253	HB-9706†
Astrocytoma cell line, human	mouse	IgG1	K117	HB-8553†
Astrocytoma cell line, human	mouse	IgG1	S5	HB-9255†
Astrovirus group antigen	mouse	IgG1	7F2-6D4-8E7	HB-11945†

* Part of the NBL collection; see page12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
ATPase, rat (Na, K dependent)	mouse	IgG1	9-A5	CRL-1844
ATPase, rat (Na, K dependent)	mouse	IgG1	9-B1	CRL-1845
Autocrine growth factor, 15 kDa, human	mouse	IgM	CBL-1	HB-8214†
B cell antigen (p50), mouse	rat/mouse	IgM	RA3-2C2/1	TIB-145
B cell derived malignancies, human	mouse	IgG2a	Lym-1	HB-8612†
B cell growth factor 1, mouse	rat/mouse	IgG1	11B11	HB-188
B cell precursors, mouse	rat/mouse	IgG2b	14.8	TIB-164
B cell stimulatory factor 1, mouse	rat/mouse	IgG1	11B11	HB-188
B cells, bovine	mouse	IgG2a	CC56	HB-273
B cells, human	mouse	IgG2a	Lym-1	HB-8612†
B lymphocytes, mouse	rat/mouse	IgM	J11d.2	TIB-183
B220, mouse	rat/mouse	IgM	RA3-3A1/6.1	TIB-146
B7.1, mouse	hamster/mouse	IgG	16-10A1	HB-301
B7.1, mouse	rat/mouse	IgG2a	1G10	CRL-2223
B7.2, mouse	rat/mouse	IgG2b	2D10	CRL-2226
B7.2, mouse	rat/mouse	IgG2a	GL1	HB-253
Basal cells (skin), human	mouse	IgG1	VM-2	HB-8530†
BCGF-1, mouse	rat/mouse	IgG1	11B11	HB-188
Bicoid (bcd) protein, *Drosophila melanogaster*	mouse	IgG1	bcd mab23	CRL-2107
Blood group A antigen	human	IgM	HAA1	HB-8534†
Bluetongue virus VP7	mouse	IgG2b	7D3A.2	CRL-1886
Bluetongue virus VP7	mouse	IgG2a	8A3B.6	CRL-1875
Bluetongue virus VP7	mouse	IgG2b	8B1B.1	CRL-1877
Bovine herpesvirus 1 (BHV-1)	bovine/mouse	IgG1	αBL5C2.870005	HB-9907†
Bovine herpesvirus 1 (BHV-1)	bovine/mouse	IgG1	αBL5C2.870009	HB-9908†
Bovine herpesvirus 1 (BHV-1)	bovine/mouse	IgG1	αBL5C2.870016	HB-9909†
Bovine herpesvirus 1 (BHV-1)	mouse	IgG1	1B8-F11	CRL-1852
Bovine herpesvirus 1 (BHV-1)	mouse	IgG2b	2H6-C2	CRL-1853
Bp35 (B cell antigen), human	mouse	IgG2a	1F5	HB-9645†
Bp50 (B cell antigen), human	mouse	IgG1	G28-5	HB-9110†
Breast cancer cells, human	mouse	IgG1	317G5.C1D3	HB-8691†
Breast cancer cells, human	mouse	IgG2a	454C11	HB-8484†
Breast cancer cells, human	mouse	IgG1	520C9	HB-8696†
Breast cancer cells, human	mouse		650E2-2B12	HB-10812†
BSF-1, mouse	rat/mouse	IgG1	11B11	HB-188
Bubonic plague bacillus	mouse	IgA	F1-3G8-1	HB-192
C3d receptor (CR2), human	mouse	IgG2a; kappa	THB-5	HB-135
Calpain 2 (CAPN2), bovine	mouse	IgG1 (kappa)	P-1	CRL-2588
Calpain, human	mouse	IgG1 (kappa)	P-6	CRL-2589
Calpain, human	mouse	IgG1 (kappa)	P-9	CRL-2590
Canine adenovirus type 1 (CAV-1)	mouse	IgG1	2E10-H2	CRL-1812
Canine adenovirus type 2 (CAV-2)	mouse	IgG2a	4H1-A7	CRL-1813
Canine distemper virus (CDV)	mouse	IgG1	CDC 1C42H11	HB-216
Carcinoembryonic antigen (CEA)	mouse	IgM	1116NS-3d	CRL-8019†
Carcinoembryonic antigen (CEA)	mouse	IgG1; kappa	T84.66A3.1A.1F2	HB-8747†
Carcinoma cells, human	mouse	IgG3	KC-4G3	HB-8709†
Carcinoma cells, human	mouse	IgM	KC-4M1	HB-8710†
Carcinoma-associated antigen, heat stable, human	mouse	IgG2a	AS 33	HB-8779†
Calpastatin (CAST), human	mouse	IgG1 (kappa)	PI-11	CRL-2591
C-cadherin	mouse		AA5	CRL-2637
CC chemokine receptor CCR9	mouse	IgG2b	LS129-3C3-E3-1	HB-12653†
CC-chemokine receptor 1 (CCR1), human	mouse	IgG1 (kappa)	LS-125-2D4-11-10-1	HB-12644†
CC-chemokine receptor 2 (CCR2), human	mouse	IgG2a (kappa)	LS132.1D9	HB-12549†
CC-chemokine receptor 2 (CCR2), human	mouse	IgM	LS132.8G2	HB-12550†
Chemokine receptor 4 (CCR4), human	mouse	IgG1 (kappa)	1G1	HB-12624†
CD1, bovine	mouse	IgG2a	CC20	HB-267
CD1, human	mouse	IgG1	OKT 6	CRL-8020†
CD1, pig	mouse	IgG2a; kappa	76-7-4	HB-140
CD1.1, mouse	rat/mouse	IgG2b; kappa	15C6	HB-326
CD1.1, mouse	rat/mouse	IgG2b; kappa	15F7	HB-322
CD1.1, mouse	rat/mouse	IgG2b; kappa	19F8	HB-321

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
CD1.1, mouse	rat/mouse	IgG1; kappa	20H2	HB-323
CD1.1, mouse	rat/mouse	IgG2b	4C4	HB-327
CD1w2, bovine	mouse	IgG2a	CC20	HB-267
CD2, bovine	mouse	IgG1	CC42	HB-272
CD2, bovine	mouse	IgG2a	IL-A42	CRL-1870
CD2, human	mouse	IgG2a	35.1	HB-222
CD2, human	mouse	IgG1	OKT 11	CRL-8027†
CD2, human	mouse	IgG1	TS2/18.1.1	HB-195
CD2, sheep	mouse	IgG2a	36F-18C	HB-285
CD3 epsilon chain, human	mouse	IgG2b	BC3	HB-10166†
CD3, human	mouse	IgM	38.1	HB-231
CD3, human	mouse	IgG2a	OKT 3	CRL-8001†
CD3, mouse	hamster/mouse	IgG	145-2C11	CRL-1975
CD4, bovine	mouse	IgG1	CC30	HB-270
CD4, bovine	mouse	IgG2a	CC8	HB-280
CD4, bovine	mouse	IgG2a	IL-A11	CRL-1879
CD4, human	mouse	IgG2b	OKT 4	CRL-8002†
CD4, mouse	rat/mouse	IgG2b	GK1.5	TIB-207
CD4, sheep	mouse	IgG1	17D	HB-262
CD4a, pig	mouse	IgG2b; kappa	74-12-4	HB-147
CD4-binding domain of the gp120 protein of HIV-1	human/mouse	IgG1	448-D	HB-10895†
CD4-binding domain of the gp120 protein of HIV-1	human/mouse	IgG1	558-D	HB-10894†
CD4-binding domain of the gp120 protein of HIV-1	human/mouse	IgG1	559/64-D	HB-10893†
CD5, bovine	mouse	IgG1	CC17	HB-281
CD5, bovine	mouse	IgG1	CC29	HB-269
CD5, human	mouse	IgG1	OKT 1	CRL-8000†
CD6, bovine	mouse	IgG2b	CC38	HB-266
CD6, human	mouse	IgG2a	12.1	HB-228
CD6, human	mouse	IgM	3Pt12B8	HB-8136†
CD7, human	mouse	IgG1; kappa	T3-3A1	HB-2
CD8, bovine	mouse	IgG1	CC58	HB-275
CD8, bovine	mouse	IgG2a	CC63	HB-264
CD8, bovine	mouse	IgG1	IL-A51	CRL-1871
CD8, human	mouse	IgG2a	51.1	HB-230
CD8, human	mouse	IgG2a	OKT 8	CRL-8014†
CD8, human	mouse	IgG1	S6F1	HB-9579†
CD8 alpha 2.2, mouse	mouse	IgM	83-12-5	CRL-1971
CD9, mouse	rat/mouse	IgG2a	KMC8.8	CRL-2212
CD11a, human	mouse	IgG1	TS2/4.1.1	HB-244
CD11a, mouse	rat/mouse	IgG2b	FD441.8	TIB-213
CD11a, mouse	rat/mouse	IgG2a; kappa	M17/4.4.11.9 (new clone of M17/4.2)	TIB-217
CD11a, mouse	rat/mouse	IgG2b; kappa	M17/5.2	TIB-237
CD11b, human	mouse	IgM; kappa	17aba	HB-248
CD11b, human	mouse	IgG2a; kappa	44aacb	HB-249
CD11b, human	mouse	IgG1	LM2/1.6.11	HB-204
CD11b, human	mouse	IgG2b	OKM 1	CRL-8026†
CD11b, mouse	rat/mouse	IgG2b	5C6 Clone 1	CRL-1969
CD11c, mouse	hamster/mouse	IgG	N418	HB-224
CD14, human	mouse	IgG2b; kappa	26ic	HB-246
CD14, human	mouse	IgG2b	3C10	TIB-228
CD14, human	mouse	IgG1; kappa	60bca	HB-247
CD18, human	mouse	IgG2a; kappa	IB4	HB-10164†
CD18, human	mouse	IgG1	TS1/18.1.2.11	HB-203
CD18, mouse	hamster/mouse	IgG	2E6	HB-226
CD18, mouse	rat/mouse	IgG2a; kappa	M18/2.a.12.7 (new clone of M18/2.a.8)	TIB-218
CD19, mouse	rat/mouse	IgG2a; kappa	1D3	HB-305
CD20, human	mouse	IgG2a	1F5	HB-9645†
CD20, human	mouse	IgG1	C273	HB-9303†
CD21, bovine	mouse	IgG2b	CC51	HB-271

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
CD21, human	mouse	IgG2a; kappa	THB-5	HB-135
CD25, human	mouse	IgG2a	7G7B6	HB-8784†
CD25, mouse	rat/mouse	IgM; kappa	7D4	CRL-1698
CD25, mouse	rat/mouse	IgG1	PC 61 5.3	TIB-222
CD28 receptor, mouse	hamster/mouse	IgG	PV1	HB-12352†
CD29, human	mouse	IgG1	TS2/16.2.1	HB-243
CD29, mouse	rat/mouse	IgG2a	KMI6	CRL-2179
CD29, sheep	mouse	IgG1	FW4-101-1-1	HB-289
CD32, human	mouse	IgG2b	IV.3	HB-217
CD32, mouse	rat/mouse	IgG2b	2.4G2	HB-197
CD33, human	mouse	IgG2a	M195	HB-10306†
CD34, human	mouse	IgG1; kappa	AC133.1	HB-12346†
CD35, human	mouse	IgG1; kappa	Mab 543	HB-8592†
CD38, human	mouse	IgG1	OKT 10	CRL-8022
CD38, human	mouse	IgG1	THB-7	HB-136
CD40 ligand (CD154, CD40L), human	mouse	IgG1	hCD40L-M90	HB-12055†
CD40 ligand (CD154, CD40L), human	mouse	IgG1	hCD40L-M91	HB-12056†
CD40 ligand, human	mouse	IgG2a	5c8	HB-10916†
CD40 ligand, mouse	hamster/mouse	IgG	MR1	CRL-2580
CD40, human	mouse	IgG2b	3A8	HB-12024†
CD40, human	mouse	IgG1	G28-5	HB-9110†
CD44, human	mouse	IgG2a	Hermes-3	HB-9480†
CD44, mouse	rat/mouse	IgG1	KM114	TIB-242
CD44, mouse	rat/mouse	IgG1	KM201	TIB-240
CD44, mouse	rat/mouse	IgG2a	KM703	CRL-1896
CD44, mouse	rat/mouse	IgG2a	KM81	TIB-241
CD44, mouse	rat/mouse	IgG2a	LYK-12	HB-316
CD44, mouse	rat/mouse	IgG2a	LYK-16	HB-319
CD44, mouse	rat/mouse	IgG1	LYK-5	HB-310
CD44, mouse, isoforms expressing variable exon V10	rat/mouse	IgG1	LYK-1	HB-306
CD44, mouse, isoforms expressing variable exon V10	rat/mouse	IgG1	LYK-7	HB-311
CD44, mouse, isoforms expressing variable exon V10	rat/mouse	IgG2a	LYK-8	HB-312
CD44, mouse, isoforms expressing variable exon V10	rat/mouse	IgG2a	LYK-9	HB-313
CD44, v4 variant, human	mouse	IgG2a	FW11-10-3	HB-257
CD44, v6 variant, human	mouse	IgG2a	FW11-9-2	HB-256
CD44, v9 variant, human	mouse	IgG1	FW11-24-17-36	HB-258
CD45, human	mouse	IgG2a	4B2	HB-196
CD45, human	mouse	IgG2a	9.4	HB-10508†
CD45, human	mouse	IgG2a; kappa	GAP 8.3	HB-12
CD45, mouse	rat/mouse	IgG2b	M1/89.18.7.HK	TIB-124
CD45, mouse	rat/mouse	IgG2a	M1/9.3.4.HL.2	TIB-122
CD45, mouse	rat/mouse	IgG2a	MB23G2	HB-220
CD45, mouse	rat/mouse	IgG2a	MB4B4	HB-223
CD45, pig	mouse	IgM; kappa	74-9-3	HB-156
CD45R, mouse	rat/mouse	IgM	RA3-3A1/6.1	TIB-146
CD45RA, mouse	rat/mouse	IgG2b	14.8	TIB-164
CD45RC, mouse	rat/mouse	IgM	I/24.D6	HB-251
CD47, human	mouse	IgG1	B6H12.2	HB-9771
CD49a, human	mouse	IgG1	TS2/7.1.1	HB-245
CD49d, sheep	mouse	IgG2b	FW3-218-1	HB-261
CD54, mouse	rat/mouse	IgG2a	BE29G1	HB-233
CD57, human	mouse	IgM; kappa	HNK-1	TIB-200
CD58, human	mouse	IgG1	TS2/9.1.4.3	HB-205
CD62E, human	mouse	IgG2a; kappa	CL2	CRL-2514
CD62E, human	mouse	IgG1; kappa	CL3	CRL-2515
CD62E, human	mouse	IgG1; kappa	CL37	CRL-2516
CD62E, human	mouse	IgG2a	H18/7	HB-11684†

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
CD62L, human	mouse	IgG2a	1H3	HB-284
CD62L, human	mouse	IgG1	DREG200	HB-302
CD62L, human	mouse	IgG1	DREG56	HB-300
CD62L, mouse	rat/mouse	IgG2a	MEL-14	HB-132
CD62L, sheep and bovine	mouse	IgG1	DU1-29	HB-263
CD62P, human	mouse	IgG1	WAPS 12.2	HB-299
CD80, mouse	hamster/mouse	IgG	16-10A1	HB-301
CD117, human	mouse	IgG2a	BA7.3C.9	HB-10716†
CDw128, human	mouse	IgG2a	10H2.12.1	HB-11494†
CDw128, human	mouse	IgG2a	4D1.5.7	HB-11495†
CD151, human	mouse	IgG1	41-2	CRL-2695
CD151, human	mouse	IgG1	50-6	CRL-2696
CD152, mouse	hamster/mouse	IgG	UC10-4F10-11	HB-304
CD154, human	mouse	IgG2a	5c8	HB-10916†
CD154, mouse	hamster/mouse	IgG	MR1	CRL-2580
Cell surface antigen on bovine periodontal ligament cells	mouse	IgM	PDL-1	CRL-1882
Cell surface antigen on human myeloma cells (M-8 antigen system)	mouse	IgG1	D 14	HB-8439†
Centromere protein B (CENP-B), human	mouse	IgG1	2D-7	HB-9667†
Cervical carcinoma, human	human	IgG1; kappa	CLN H11.4	HB-8307†
Cervical carcinoma, human	human	IgM	CLNH5.5	HB-8206†
Channel catfish immunoglobulin	mouse	IgG1; kappa	E-8	HB-10179†
Chlamydia genus-specific antigen	mouse	IgG2b; kappa	89MS30	HB-11300†
Cholesterol	mouse	IgM	2C5-6	HB-8995†
Choriocarcinoma tumor cell antigen, human	mouse	IgG2a	K66	HB-8767†
Choriocarcinoma tumor cell antigen, human	mouse	IgG1	SV63	HB-8766†
Choriocarcinomas, human	mouse	IgG1 (Igh-4a allotype)	162-46.2	HB-187
Chronic lymphocytic leukemia (CLL)	mouse	IgG1	Lym-2	HB-8613†
Class II antigen, beta chain, mouse	hamster/mouse	IgG	KL277	CRL-2030
Class II antigen, beta chain, mouse	mouse	IgG1	KL295	CRL-1996
Class II antigen, beta chain, mouse	mouse	IgG2b	KL304	CRL-2027
Clathrin, bovine (brain)	mouse	IgM	CVC.4	TIB-137
Clathrin, heavy chain, human	mouse	IgG1	TD.1	CRL-2232
Clathrin, heavy chain, human	mouse	IgG1	X22	CRL-2228
Clathrin, light chain, bovine (brain)	mouse	IgG1	CVC.1	TIB-135
Clathrin, light chain, bovine (brain)	mouse	IgG2a	CVC.7	TIB-138
Clathrin, light chain, human	mouse	IgG2b	CON.1	CRL-2229
Colchicine	mouse	IgG2a	C44	CRL-1943
Collagen, bone type 1	mouse	IgG1	1H11	HB-10611†
Colon carcinoma-associated antigens (CCAA), human	mouse	IgG1; kappa	PCA 31.1	HB-12314†
Colon carcinoma-associated antigens (CCAA), human	mouse	IgG2a; kappa	PCA 33.28	HB-12315†
Colon cells, 29-kDa glycoprotein, human	mouse	IgG2a	HT 29/26	HB-8247†
Colon tumor-associated antigen (CTAA) 16.88	human	IgG3; kappa	CO 88BV59-1	CRL-10624†
Colon, adenocarcinoma, human	mouse	IgG1	CLT 85	HB-8240†
Colon, adenocarcinoma, human	mouse	IgG3	HT 29/36	HB-8248†
Colonic mucin glycoprotein, human	mouse	IgG2a	UC7	HB-9753†
Colonic protein, human	mouse	IgM	7E12H12	HB-9397†
Colony stimulating factor, subclass I (CSF-I), human	mouse	IgG1	F18 AF1	HB-8208†
Colony stimulating factor, subclass I (CSF-I), human	mouse	IgG1	F1A3-23	HB-8207†
Colorectal carcinoma monosialoganglioside	mouse	IgG1	1116-NS-19-9	HB-8059†
Colorectal carcinoma-associated tumor antigen	mouse	IgG2b	XMMCO-791	HB-9173†
Common leukocyte antigen, human	mouse	IgG2a	4B2	HB-196
Common leukocyte antigen, mouse	rat/mouse	IgG2b	M1/89.18.7.HK	TIB-124
Common leukocyte antigen, mouse	rat/mouse	IgG2a	M1/9.3.4.HL.2	TIB-122
Common leukocyte antigen, mouse	rat/mouse	IgG2a	MB23G2	HB-220
Common leukocyte antigen, mouse	rat/mouse	IgG2a	MB4B4	HB-223
Complement C1q, human	mouse	IgG	12A5B7	HB-8328†
Complement C1q, human	mouse	IgG	4A4B11	HB-8327†

* Part of the NBL collection; see page12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Complement C3b receptor, human	mouse	IgG1; kappa	Mab 543	HB-8592†
Concanavalin A (Con A)	mouse	IgG1	71A7	TIB-147
Cortical thymic epithelium, mouse	rat/mouse	IgG2a	CDR1	HB-213
Cortical thymocytes, mouse	rat/mouse	IgM	J11d.2	TIB-183
Coxsackievirus B4	mouse	IgG2a; kappa	204-4	HB-185
Coxsackievirus B4	mouse	IgG2a; kappa	339-1	HB-186
Coxsackievirus B4	mouse	IgG2a; kappa	356-1	HB-181
Coxsackievirus B4	mouse	IgG2a; kappa	38-1	HB-182
Coxsackievirus-adenovirus receptor (CAR), human	mouse	IgG1	RmcB	CRL-2379
CR1, human	mouse	IgG1; kappa	Mab 543	HB-8592†
C-reactive protein, human	mouse	IgG2a; kappa	HD2-4	HB-86
Creatine kinase - MM and MB, human	rat/mouse	IgG2a; kappa	CKMM 14.15	HB-9419†
Creatine kinase - MM, human	rat/mouse	IgA; kappa	CKMM 14.5	HB-9420†
Creatine kinase - MM, human	rat/mouse	IgG1; kappa	CKMM 14.52	HB-9421†
CTLA-4, mouse	hamster/mouse	IgG	UC10-4F10-11	HB-304
Cutaneous lymphocyte antigen (CLA), human	rat/mouse	IgM	HECA-452	HB-11485†
Cutaneous melanocytes (M-10 antigen system), human	mouse	IgG1	M 144	HB-8440†
Cutaneous melanocytes (M-24 antigen system), human	mouse	IgG1	M-24 (M138)	HB-8449†
Cutaneous melanocytes (M-25 antigen system) , human	mouse	IgG2b	L368	HB-8450†
Cutaneous melanocytes (M-4 antigen system), human	mouse	IgG1	M 111	HB-8438†
CXCR3	mouse	IgG1 (kappa)	1C6	HB-12330†
Cystic fibrosis transmembrane conductance regulator (CFTR)	mouse	IgG1	mAb 13-1	HB-10565†
Cystic fibrosis transmembrane conductance regulator (CFTR)	mouse	IgG2a; kappa	mAB 24-1	HB-11947†
Cystic fibrosis transmembrane conductance regulator (CFTR)	mouse	IgG1; kappa	mAB 24-2	HB-11946†
Cytokeratin 18 (CK18)	mouse	IgG	UCD/PR 10.11	HB-8694†
Cytokeratin 8 (CK8)	mouse	IgG	UCD/PR 10.11	HB-8694†
Cytomegalovirus (HCMV) UL18 heavy chain, human	mouse	IgG1	10C7	CRL-2430
Cytomegalovirus (HCMV), immediate - early antigen, human	mouse	IgG1	L-14	HB-8554†
Cytomegalovirus (MCMV) m144 heavy chain, mouse	mouse	IgG1	15C6	CRL-2431
DEC-205, human	mouse	IgG2b	MG38	CRL-2640
DEC-205, mouse	rat/mouse	IgG2a	DEC-205	HB-290
Delta heavy chain, human	mouse	IgG3; kappa	δ TA4-1	HB-70
Dendritic cell antigen, human	mouse	IgG2b	MG38	CRL-2640
Dendritic cell antigen, mouse	rat/mouse	IgG2a	DEC-205	HB-290
Dendritic cells, mouse	rat/mouse	IgG2b	33D1	TIB-227
Dengue virus complex	mouse	IgG2a	D3-2H2-9-21	HB-114
Dengue virus type 1	mouse	IgG1	15F3-1	HB-47
Dengue virus type 3	mouse	IgG1	5D4-11	HB-49
Dengue virus type 4	mouse	IgG1	1H10-6	HB-48
Dengue virus-2, type specific determinant	mouse	IgG1	3H5-1	HB-46
Dinitrophenyl (DNP)	hamster/mouse	IgG	UC8-1B9	CRL-1968
Dioxins	mouse	IgG2a; kappa	DD-4	HB-9743†
Diphtheria toxin	human/mouse	IgG	16M3F10	HB-8363†
Disialosyl Lea (tumor associated fucoganglioside)	mouse	IgG3	FHCR-1-2516/FH7	HB-8861†
DNA (single stranded)	mouse	IgG3	MRSS-1 (D_2D_4)	HB-69
DNA polymerase alpha, human	mouse	IgG1	SJK-132-20	CRL-1640
DNA polymerase alpha, human	mouse	IgG1	SJK-237-71	CRL-1645
DNA polymerase alpha, human	mouse	IgG1	SJK-287-38	CRL-1644
DNA polymerase alpha, human	mouse	IgG1	STK 1	CRL-1652
DNA polymerase epsilon (pol epsilon), human	mouse	IgG2a	3C5.1	CRL-2284
DNA polymerase III holoenzyme, *Escherichia coli*	mouse	IgM	123-10	CRL-1707
DNA polymerase III holoenzyme, *Escherichia coli*	mouse	IgG1	123-28	CRL-1713

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Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
DNA polymerase III holoenzyme, *Escherichia coli*	mouse	IgM	68-1-2	CRL-1712
DNA, double stranded	mouse	IgM	CH26-1352	HB-8329†
DNP and TNP substituted proteins	mouse	IgA; lambda 2	MOPC 315	TIB-23
EGF receptor	mouse	IgG1	225	HB-8508†
EGF receptor	mouse	IgG1	455	HB-8507†
EGF receptor	mouse	IgG2a	528	HB-8509†
EGF receptor	mouse	IgG	579	HB-8506†
EGF receptor, human	mouse	IgM	Mab 96	HB-9763†
Eimeria tenella sporozoites	mouse	IgG1	S1E4	HB-8332†
Eimeria tenella sporozoites	mouse	IgG2a	S3D3	HB-8331†
Eimeria tenella sporozoites and merozoites	mouse	IgG1	13.90.2	HB-8337†
Eimeria tenella sporozoites and merozoites	mouse	IgG2a	2.03.7	HB-8389†
ELAM-1, human	mouse	IgG2a; kappa	CL2	CRL-2514
ELAM-1, human	mouse	IgG1; kappa	CL3	CRL-2515
ELAM-1, human	mouse	IgG1; kappa	CL37	CRL-2516
ELAM-1, human	mouse	IgG2a	H18/7	HB-11684†
EM10	mouse	IgM; kappa	SM27-1045	HB-11917†
Endothelial cells, IL-1 activated, human	mouse	IgG1	7A9	HB-10135†
Endothelial cells, peripheral lymph node, mouse	rat/mouse	IgM	MECA-79	HB-9479†
Endothelial leukocyte adhesion molecule 1 (ELAM-1), human	mouse	IgG2a; kappa	CL2	CRL-2514
Endothelial leukocyte adhesion molecule 1 (ELAM-1), human	mouse	IgG1; kappa	CL3	CRL-2515
Endothelial leukocyte adhesion molecule 1 (ELAM-1), human	mouse	IgG1; kappa	CL37	CRL-2516
Endothelial leukocyte adhesion molecule 1 (ELAM-1), human	mouse	IgG2a	H18/7	HB-11684†
Endothelium, human	mouse	IgG1; kappa	10B9	HB-172
Endothelium, human	mouse	IgG1; kappa	14E5	HB-174
Ependymal cell, rat	mouse	IgG2a	RAN-2	TIB-119
Epidermal growth factor (EGF) receptor	mouse	IgG1	225	HB-8508†
Epidermal growth factor (EGF) receptor	mouse	IgG1	455	HB-8507†
Epidermal growth factor (EGF) receptor	mouse	IgG2a	528	HB-8509†
Epidermal growth factor (EGF) receptor	mouse	IgG	579	HB-8506†
Epidermal growth factor (EGF) receptor, human	mouse	IgM	Mab 96	HB-9763†
Epidermis, basal layer, fetal and neonatal, human	mouse	IgG1	DAL K20	CRL-2288
Epidermis, basal layer, fetal and neonatal, human	mouse	IgG1	DAL K29	CRL-2291
Epithelial cells, gastrointestinal tract mucosa, 52-kDa protein, human	mouse	IgG1	CLT 152	HB-8244†
Epithelium, human	mouse	IgM; kappa	Ep-16	HB-155
Epstein-Barr virus (EBV)	mouse	IgG1	72A1	HB-168
Epstein-Barr virus (EBV) receptor	mouse	IgG2a; kappa	THB-5	HB-135
Equine infectious anemia virus (EIAV) core antigen (p26)	mouse	IgG1	EIAV 12E8.1	HB-8917†
erb B (v-*erb* B) oncogene peptide, synthetic	mouse	IgG1	171-11B9	CRL-2661
erb B (v-*erb* B) oncogene peptide, synthetic	mouse	IgG1	172-12A4	CRL-2660
erb B (v-*erb* B) oncogene peptide, synthetic	mouse	IgG1; kappa	173-1C11	CRL-2659
erb B2 (c-*erb* B2) protein, human	mouse	IgG1; kappa	20.3	CRL-2655
erb B-2 protein, human	mouse	IgG1	Ab 21.1	HB-11601†
erb B-2 protein, human	mouse	IgG1	Ab 23.1	HB-11602†
Ergonovine	mouse	IgG2b (kappa)	EN9F10	CRL-2403
Erythrocytes, mouse	rat/mouse	IgM	J11d.2	TIB-183
Erythropoietin	mouse	IgG1	5F12 AD3	HB-8209†
Erythropoietin, human	rat/mouse	IgG2a	BF-11	CRL-8164†
Escherichia coli 0157:H7 strain 932	mouse	IgG2a	4E8C12	HB-10452†
Farnesyltransferase, alpha subunit	mouse	IgG1	IgG-IB7	CRL-2418
Fas antigen, human	mouse	IgG1	huFasM3	HB-11726†
Fas antigen, human	mouse	IgG1	huFasM38	HB-11465†
Fc alpha receptor, human	mouse	IgM	My 43.51	HB-12128†
Fc gamma receptor, high affinity, human	mouse	IgG1; kappa	CT6-1D7	CRL-2438
Fc gamma receptor, mouse	rat/mouse	IgG2b	2.4G2	HB-197

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
FcRI, human	mouse	IgG1; kappa	CT6-1D7	CRL-2438
FcRI, human	mouse	IgM	My 43.51	HB-12128†
FcRII, mouse	rat/mouse	IgG2b	2.4G2	HB-197
FcRn heavy chain heterodimers	mouse	IgG1	1G3	CRL-2434
FcRn heavy chain heterodimers	mouse	IgG1	2G3	CRL-2435
Feline leukemia virus (FeLV), p27 protein	mouse	IgG	$24IA_2E_2E_{10}D_5$	HB-8049†
Fibrin, human	mouse		F45J	HB-9740†
Fibrin, human	mouse	IgG1; kappa	MH1	HB-9739†
Fibrinogen, human	mouse		F45J	HB-9740†
Fibronectin, human	mouse	IgG1	HFN 36.3	CRL-1605
Fibronectin, human	mouse	IgG1	HFN 7.1	CRL-1606
Fibronectin, human	mouse	IgG1	P_3NP/PFn	HB-91
Fibronectin, human, onco-fetal determinant	mouse	IgG1	FHCR-1-2813/FDC-6	HB-9018†
Fimbriae (2134P) of enterotoxigenic *E. coli*	mouse	IgG1	αM346C7C1	HB-11124†
Flavivirus group antigen	mouse	IgG2a	D1-4G2-4-15	HB-112
Flk-1/KDR	rat/mouse	IgG1; kappa	DC101	HB-11534†
Follicle stimulating hormone (FSH) receptor, human	mouse	IgG1	FSHR-18	CRL-2688
Forssman antigen	rat/mouse	IgM	M1/22.25.8.HL	TIB-121
Forssman antigen	rat/mouse	IgM	M1/87.27.7.HLK	TIB-123
fos oncogene peptide, synthetic	mouse	IgG2b; kappa	411-14E10	CRL-2663
fos oncogene peptide, synthetic	mouse	IgG1 and IgG2b	413-15D12	CRL-2653
Fumonisin B1	mouse	IgG1 (kappa)	FB8H3 [Mab8H3]	CRL-2402
Gamma heavy chain, human	mouse	IgG1; kappa	1410 KG7	HB-43
Gamma heavy chain, human	mouse	IgG2b; lambda	C3-124	HB-60
6B Ganglioside (tumor-associated fucoganglioside)	mouse	IgM	FHCR-1-2624/FH6/ FHOT-1-3019	HB-8873†
Ganglioside associated with endocrine cells, human T lymphocytes, and neuronal cells	mouse	IgM; kappa	3G5	CRL-1814
Ganglioside GD2	mouse	IgM	Mab 126	HB-8568†
Gangliosides GD2 and GD3	mouse	IgG2a	ME361S2a	HB-9326†
Gangliosides GM3 and GM4, human	human	IgM; kappa	L612	CRL-10724†
Giardia muris trophozoites	mouse	IgG3; kappa	1A3.1	CRL-1961
Giardia muris trophozoites	mouse	IgG2b; kappa	2B5.3	CRL-1960
Giardia muris trophozoites	mouse	IgG1; kappa	3C7.2	CRL-1959
Glioblastoma, human	mouse	IgM	PI 153/3	TIB-198
Glomalin (soil glycoprotein)	mouse	IgM; kappa	32B11	CRL-2559
Glucocorticoid receptor, mouse and rat	mouse	IgG2b	FIGR	CRL-2173
Glutamic acid decarboxylase (GAD)	mouse	IgG1	GAD-1	HB-184
Glycated serum albumin (glycoalbumin)	mouse	IgG	A717	HB-9596†
Glycolipid antigen	mouse	IgM	A2B5 clone 105	CRL-1520
Glycolipids, di- and trifucosylated type 2 chain	mouse	IgG3	FHCR-1-2075/FH4	HB-8775†
Glycophorin A, type M	mouse	IgG1; kappa	6A7M	HB-8159†
Glycophorin A, type M and type N	mouse	IgG1; kappa	10F7MN	HB-8162†
Glycophorin A, type N	mouse	IgG1; kappa	8A2N	HB-8161†
Glycophorin A, type N	mouse	IgG2a; kappa	NN-4	HB-8473†
Glycophorin A, type N, human	mouse	IgM; kappa	NN-3	HB-8474†
Glycophorin A, type N, human	mouse	IgG1; kappa	NN-5	HB-8476†
Glycophorin, human	mouse	IgG1	G26.4.1C3/86	HB-9893†
Glycoprotein antigen, tumor vascular endothelium	mouse	IgG1	H572	HB-11608†
Glycosphingolipid	mouse	IgM	1B2-1B7	TIB-189
Glycosphingolipid	mouse	IgG3	YI 328-18	HB-9306†
Glycosphingolipid, type II chain H structure	mouse	IgM	BE2	TIB-182
Golgi complex (GCI), rat	mouse	IgG1	6F4C5	CRL-1869
Golgi vesicular transport protein	mouse	IgM	4A6	CRL-1928
Gonadotropin releasing hormone, carboxy terminal	mouse	IgG1	USASK/DSIL-LHRH-A1	HB-9094†
gp120 glycoprotein	mouse	IgG1	S5	HB-9255†
gp39, mouse	hamster/mouse	IgG	MR1	CRL-2580
gp70 envelope antigen (ENV) protein of murine leukemia viruses (MuLV)	mouse	IgG2a	48	CRL-1913
gp70 envelope antigen (ENV) protein of murine leukemia viruses (MuLV)	mouse	IgM	514	CRL-1914

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gp90 glycoprotein, human	mouse	IgG2a	G253	HB-9706†
GPIIIa, platelet, human	mouse	IgG1	AP-3	HB-242
Granulocyte macrophage colony stimulating factor (GM-CSF), human	rat/mouse	IgG2a	BVD2-21C11.3	HB-9569†
Granulocyte macrophage colony stimulating factor (GM-CSF), human	rat/mouse	IgG2a	BVD2-23B6.4	HB-9568†
Granulocyte, human	mouse	IgG2b	OKM 1	CRL-8026†
Granulocyte, pig	mouse	IgG1; kappa	74-22-15	HB-142
Granulocyte, pig	mouse	IgG2b; kappa	74-22-15A	HB-142.1
Growth hormone (hGH), human	mouse	IgG1; kappa	HGH-B	HB-10596†
H-2 (all haplotypes)	rat/mouse	IgG2a	M1/42.3.9.8.HLK	TIB-126
H-2 b	mouse	IgG1; kappa	B8-24-3	TIB-139
H-2 D b	mouse	IgM; kappa	23A-5-21S	HB-36
H-2 D b	mouse	IgM; kappa	28-11-5S	HB-19
H-2 D d	mouse	IgG2a; kappa	34-2-12S	HB-87
H-2 D d	mouse	IgG2a; kappa	34-4-20S	HB-75
H-2 D d	mouse	IgM	34-4-21S	HB-76
H-2 D d	mouse	IgG2a; kappa	34-5-8S	HB-102
H-2 D k	mouse	IgG2a; kappa	15-5-5S	HB-24
H-2 from non-k haplotype mice	rat	IgG2a	K204	HB-221
H-2 K b	mouse	IgM; kappa	28-13-3S	HB-41
H-2 K b	mouse	IgG2a	AF6-88.5.3	HB-158
H-2 K b	mouse	IgG2b; kappa	Y-3	HB-176
H-2 K b, D b	mouse	IgG2a; kappa	28-8-6S	HB-51
H-2 K d	mouse	IgM	31-3-4S	HB-77
H-2 K d	mouse	IgG2a	SF1-1.1.10	HB-159
H-2 K d, D d	mouse	IgG2a; kappa	34-1-2S	HB-79
H-2 K d, D d	mouse	IgM	34-7-23S	HB-101
H-2 K k	mouse	IgG2a; kappa	16-1-11N	HB-16
H-2 K k	mouse	IgG2a; kappa	16-3-1N	HB-25
H-2 K k	mouse	IgG2a; kappa	16-3-22S	HB-5
H-2 K k	mouse	IgG1	AF3-12.1.3	HB-160
H-2 K k, D k	mouse	IgM; kappa	12-2-2S (clone 5F11)	HB-50
H-2 K k, D k	mouse	IgG2b; kappa	15-1-5P	HB-53
H-2 K k, D k	mouse	IgG2a; kappa	15-3-1S	HB-13
H-2 K k, D k	mouse	IgG2a; kappa	16-1-2N	HB-14
H-2 K k, D k	mouse	IgG2a; kappa	3-83P	HB-20
H-2 K of the k, q, p and r haplotypes	mouse	IgG2a	11-4.1	TIB-95
H7 flagella, *E. coli*	mouse	IgG1	MARC 2B7	CRL-2509
Hassall's bodies, human	mouse	IgM	TE15	HB-206
Hassall's bodies, human	mouse	IgG1	TE16	HB-210
Hassall's bodies, human	mouse	IgM	TE19	HB-211
Hassall's bodies, human	mouse	IgG2a	TE8	HB-212
Heat-stable antigen, mouse	rat/mouse	IgG2b	M1/69.16.11.HL	TIB-125
Heat-stable antigen, mouse	rat/mouse	IgG2c	M1/75.16.4.HLK	TIB-127
HeLa cells	mouse		$1A_3$	HB-8563†
Hematopoietic cells, human	mouse	IgG1	B3/25	CRL-8034†
Hen egg lysozyme (HEL)	mouse	IgG1	Aw3.18.14	CRL-2826
Hepatitis B virus surface antigen (HBsAg)	mouse	IgM	H21F8-1	CRL-8018†
Hepatitis B virus surface antigen (HBsAg)	mouse	IgG1	H25B10	CRL-8017†
Hepatitis B virus surface antigen (HBsAg)	mouse	IgG1	H25B10	CRL-8017A†
Hepatocyte growth factor receptor	mouse	IgG1 (kappa)	1A3.3.13	HB-11894†
Hepatocyte growth factor receptor	mouse	IgG1 (kappa)	5D5.11.6	HB-11895†
HER-2/neu	mouse	IgG1 (kappa)	BD5-2d	HB-9689†
HER-2/neu	mouse	IgG1 (kappa)	NB3	HB-10205†
HER-2/neu	mouse	IgG1 (kappa)	TA-1	HB-10206†
HER-2/neu	mouse	IgM (kappa)	OD-3	HB-10204†
HER2 receptor	mouse	IgG1	A-HER2	CRL-10463†
Herpes simplex virus type 1 (HSV-1) glycoprotein	mouse	IgG2a	52-S	HB-8181†
Herpes simplex virus type 1 (HSV-1) glycoprotein	mouse	IgG2a	53-S	HB-8182†

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Herpes simplex virus type 1 (HSV-1), immediate early protein (ICP 4)	mouse	IgG2a	58-S	HB-8183†
Herpes simplex virus type 1 (HSV-1), internal capsid protein 8 (ICP 8)	mouse	IgG2a	39-S	HB-8180†
Herpes simplex virus type 1 (HSV-1), nucleocapsid protein (p40)	mouse	IgG1	1D4	HB-8068†
Herpes simplex virus type 2 (HSV-2), nucleocapsid protein (p40)	mouse	IgG1	3E1	HB-8067†
HFE	mouse	IgG1	1C3	CRL-2441
HFE	mouse	IgG1	2A11	CRL-2442
HFE	mouse	IgM; kappa	2A5	CRL-2444
HFE	mouse	IgG1	2B7	CRL-2443
HFE	mouse	IgM; kappa	3A5	CRL-2440
HIV gp41	mouse	IgG1; kappa	MH-SVM25	HB-8871†
HIV p17	mouse	IgG1; kappa	MH-SVM33C9	HB-8975†
HIV p24	mouse	IgG2; kappa	MH-SVM23	HB-8870†
HIV p24	mouse	IgG1; kappa	MH-SVM26	HB-8872†
HIV-1 gp120	mouse	IgG1	46-2	CRL-2186
HIV-1 gp120	mouse	IgG1	46-4	CRL-2178
HIV-1 gp120	mouse	IgG1	46-5	CRL-2184
HIV-1 gp120	mouse	IgG1	55-2	CRL-2155
HIV-1 gp120	mouse	IgG1	55-36	CRL-2153
HIV-1 gp120	mouse	IgG2a	55-6	CRL-2156
HIV-1 gp120	mouse	IgG2a	55-83	CRL-2185
HIV-1 gp120	mouse	IgG1	803-15.6	CRL-2395
HIV-1 p17	mouse	IgG1; kappa	MH-SVM33C9	HB-8975†
HIV-1 p24	mouse	IgG1	31-42-19	HB-9726†
HIV-1 p24	mouse	IgG1	31-90-25	HB-9725†
HLA A2, B17	mouse	IgG1	MA2.1	HB-54
HLA A3	mouse	IgG2a; kappa	GAP A3	HB-122
HLA A3	rat/mouse	IgM	WFL3C6.1	HB-8157†
HLA B27, B7	mouse	IgG2a	B27M1	HB-157
HLA B27, Bw47	mouse	IgM	B27M2	HB-165
HLA B5	mouse	IgG1	4D12	HB-178
HLA B7	mouse	IgG1	BB7.1	HB-56
HLA B7, B40	mouse	IgG1	MB 40.3	HB-105
HLA B7, B40	mouse	IgG1	MB40.2	HB-59
HLA B7, Bw22, B27	mouse	IgG1	ME 1	HB-119
HLA B7,B40	mouse	IgG1	BB7.6	HB-115
HLA Bw6	rat/mouse	IgG2b	SFR8-B6	HB-152
HLA DC1	mouse	IgG2a	G2a.5	HB-110
HLA DC1	mouse	IgG2b	G2b.2	HB-109
HLA DQ	mouse	IgG1; kappa	IVD12	HB-144
HLA DQw1	mouse	IgG1	Genox 3.53	HB-103
HLA DR	mouse	IgG1	Antibody 2.06	HB-104
HLA DR, DP, DQ	mouse	IgG1; kappa	IVA12	HB-145
HLA DR, DQ	mouse	IgG2a	9.3F10	HB-180
HLA DR5	rat/mouse	IgG2b	SFR3-DR5	HB-151
HLA heavy chain	mouse	IgG2a; kappa	171-4	HB-296
HLA-DR alpha chain	mouse	IgG2a	LB3.1	HB-298
HMG-CoA reductase (3-hydroxy-3-methyl-glutaryl Coenzyme A reductase)	mouse	IgG1	A9	CRL-1811
Hog renin	mouse	IgG1	F32 VIII C4	CRL-1653
HTLV-III gp41	mouse	IgG1; kappa	MH-SVM25	HB-8871†
HTLV-III p17	mouse	IgG1; kappa	MH-SVM33C9	HB-8975†
HTLV-III p24	mouse	IgG2; kappa	MH-SVM23	HB-8870†
HTLV-III p24	mouse	IgG1; kappa	MH-SVM26	HB-8872†
Human epidermal growth factor (EGF) receptor	mouse	IgG2a; kappa	Mab 108	HB-9764†
H-Y antigen	mouse	IgM; kappa	12/44	HB-9070†
H-Y antigen	mouse	IgM; kappa	12/49	HB-9071†
I-A	mouse	IgG2a	Y-3P	HB-183

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
I-A b	mouse	IgM	25-5-16S	HB-37
I-A b	mouse	IgM	25-9-3S	HB-38
I-A b	mouse	IgG2a	AF6-120.1.2	HB-163
I-A b and I-A d	mouse	IgG2a; kappa	25-9-17S II	HB-26
I-A b and I-A d	mouse	IgG3	BP107.2.2	TIB-154
I-A b, I-A d	mouse	IgM; kappa	28-16-8S	HB-35
I-A b, I-A d, I-A q, I-E d and I-E k	rat/mouse	IgG2b; kappa	M5/114.15.2	TIB-120
I-A b,d	rat/mouse	IgG2b	B21-2	TIB-229
I-A d	mouse	IgG2a; kappa	34-5-3S	HB-85
I-A d	mouse	IgG2a; kappa	MK-D6	HB-3
I-A k	mouse	IgG2b	11-5.2.1.9	TIB-94
I-A k	mouse	IgM; kappa	26-7-11S	HB-15
I-A k	mouse	IgM	26-8-16S	HB-42
I-A of k, r, f and s haplotypes	mouse	IgG2a	10-3.6.2	TIB-92
I-A of the k, r, f and s haplotypes	mouse	IgG2b	10-2.16	TIB-93
I-A s	mouse	IgG2b	MK-S4	HB-4
Ia, human	mouse	IgG1; kappa	L203	HB-171
Ia, human	mouse	IgG1; kappa	L227	HB-96
Ia, human	mouse	IgG2a	L243	HB-55
I-A, I-E, monomorphic, mouse	hamster/mouse	IgG	N22	HB-225
Ia, rabbit	mouse	IgG2a	2C4	CRL-1760
ICAM-1, canine	mouse	IgG1	CL18/6	CRL-2518
ICAM-1, human	mouse	IgG2a	R6.5.D6.E9.B2	HB-9580†
ICAM-1, mouse	rat	IgG2b	YN1/1.7.4	CRL-1878
ICAM-1, mouse	rat/mouse	IgG2a	BE29G1	HB-233
ICAM-4, rat	mouse	IgG1	127H	HB-11911†
Idiotypic determinant on on anti-chlamydia genus antibody	mouse	IgG1; kappa	91MS441	HB-11301†
Idiotypic determinant on the P3X63Ag8 myeloma	mouse protein	IgG2b; kappa	80 V 5B4	TIB-132
I-E	mouse	IgG2b	Y-17	HB-179
I-E k	mouse	IgG2a; kappa	14-4-4S	HB-32
I-E k	mouse	IgG2a; kappa	17-3-3S	HB-6
Ig-4a allotype on mouse IgG1	mouse	IgG2a	Ig(4a)10.9	HB-146
IgA, human	mouse	IgG1; kappa	CH-EB6	HB-200
IgD, Ig-5a allotype, mouse	mouse	IgG2a	Ig(5a)7.2 (formerly 10-4-22)	TIB-149
IgD, mouse	rat/mouse	IgG2a	11-26c	HB-250
IgE, human	mouse	IgG1; kappa	CIA-E-4.15	HB-235
IgE, human	mouse	IgG1; kappa	CIA-E-7.12	HB-236
IgE, human	mouse	IgG2a; kappa	E5BB3IIA2	HB-121
IgG (Fc), human	mouse	IgG2b	HP6000	CRL-1754
IgG (Fc), human	mouse	IgG2a	HP6017	CRL-1753
IgG (Fc), human	mouse	IgG1	HP6058	CRL-1786
IgG (Fd, F(ab')2, Fab), human	mouse	IgG2a	HP6045	CRL-1757
IgG Fc receptor, human	mouse	IgG2b	IV.3	HB-217
IgG1 (Fc), human	mouse	IgG2b	HP6001	CRL-1755
IgG1 (Fc), rat	mouse	IgG2b	RG11/39.4	TIB-170
IgG2 (Fc), human	mouse	IgG1	HP6002	CRL-1788
IgG2 (Fd), human	mouse	IgG1	HP6014	CRL-1752
IgG2, mouse	rat/mouse	IgG2b; kappa	7D2-1.4.1.5	HB-92
IgG2, mouse	rat/mouse	IgG2a	ED1-19-1-6-5	HB-90
IgG2a (Fab'), rat	mouse	IgG2b	RG9/6.13 HLK	TIB-167
IgG2a (Fc), rat	mouse	IgG2b	RG7/1.30	TIB-173
IgG2a, Ig-1a allotype, mouse	mouse	IgG2a	Ig(1a)8.3 (formerly 20-8.3)	TIB-148
IgG2a, Igh-1b allotype, mouse	mouse	IgM	RDP 45/20	TIB-98
IgG2b (Fc), rat	mouse	IgG2b	RG7/11.1	TIB-174
IgG3 (Fc), human	mouse	IgG1	HP6003	CRL-1756
IgG3 (hinge), human	mouse	IgG1	HP6047	CRL-1774
IgG3 hinge region, human	mouse	IgG1	HP6050	CRL-1768
IgG3, mouse	rat/mouse	IgG1	2E.6	HB-128

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
IgG4 (Fab), human	mouse	IgG2a	HP6020	CRL-1789
IgG4 (Fc), human	mouse	IgG3	HP6023	CRL-1776
IgG4 (Fc), human	mouse	IgG1	HP6025	CRL-1775
Igh-5.3 (IgD b,e)	mouse	IgG1	AF6-122.2.5	HB-199
Igh-5.4 (IgD a)	mouse	IgG2b	AMS 9.1.1.1	HB-161
Igh-5.5 (IgD e)	mouse	IgG2b	AF4-73.3.1	HB-201
Igh-5b (IgD b allotype)	mouse	IgG1	Ig(5b)6.3	TIB-96
Igh-6.6 (IgM b)	mouse	IgG1	AF6-78.25.4	HB-162
IgM (Igh-6.5 allotype), mouse	rat/mouse	IgG1; kappa	Bet-1	HB-100
IgM (lambda), human	mouse	IgG2b; kappa	LP4.4	HB-232
IgM (mu heavy chain), mouse	rat/mouse	IgG2b	331.12	TIB-129
IgM, bovine	mouse	IgG1	IL-A30	CRL-1894
IgM, human	mouse	IgG1	M-2E6	HB-138
IgM, mouse	rat/mouse	IgG1; kappa	Bet-2	HB-88
IgM, pig	mouse	IgG1; kappa	5C9	HB-8371†
IgM, rabbit	mouse	IgG1	NRbM	CRL-1839
IL-1 beta, human	mouse	IgG1; kappa	ILB1-H21	HB-10220†
IL-1 beta, human	mouse	IgG1; kappa	ILB1-H34	HB-10221†
IL-1 beta, human	mouse	IgG1; kappa	ILB1-H6	HB-10219†
IL-1 beta, human	mouse	IgG2b; kappa	ILB1-H67	HB-10222†
IL-1 beta, recombinant, bovine	mouse	IgG1	SA22	CRL-2052
IL-2, mouse	rat/mouse	IgG2a	S4B6-1	HB-10968†
IL-4, mouse	rat/mouse	IgG1	11B11	HB-188
IL-8, human	mouse	IgG1	EL-NC-1S	HB-9647†
IL-12 p40, mouse	rat/mouse	IgG2a	R1-5D9	CRL-2360
IL-12 p40, mouse	rat/mouse	IgG2b	R2-10F6	CRL-2358
IL-12 p75, mouse	rat/mouse	IgG2b	R2-9A5	CRL-2357
IL-12, human	rat/mouse	IgG1	20C2	CRL-2382
IL-15, human	mouse	IgG1	hIL-15-M110	HB-12061†
IL-15, human	mouse	IgG1	hIL-15-M111	HB-12062†
Infectious bovine rhinotracheitis virus (IBRV)	mouse	IgG1	1B8-F11	CRL-1852
Infectious bursal disease (IBD) virus	mouse	IgG2a; kappa	B69	HB-9437†
Infectious bursal disease (IBD) virus	mouse	IgG2a; kappa	R63	HB-9490†
Infectious bursal disease (IBD) virus, serotypes 1 and 2	mouse	IgG1; kappa	B29	HB-9746†
Inflammatory cells, human	mouse	IgG1	MY904	HB-9510†
Influenzavirus A matrix protein (M)	mouse	IgG1	M2-1C6-4R3	HB-64
Influenzavirus A nucleoprotein	mouse	IgG1	46/4	HB-67
Influenzavirus A nucleoprotein	mouse	IgG2a	H16-L10-4R5	HB-65
Influenzavirus hemagglutinin	mouse	IgG2a	73/1	HB-66
Insulin	mouse	IgG2a; kappa	BE3F9	HB-133
Insulin	mouse	IgG1; kappa	CC9C10	HB-123
Insulin	mouse	IgG1; kappa	CE9H9	HB-127
Insulin	mouse	IgG1; kappa	CG7C7	HB-126
Insulin	mouse	IgG2a; kappa	DB9G8	HB-124
Insulin (residues A8-10), human	mouse	IgG1; kappa	AE9D6	HB-125
Insulin receptor, human	mouse	IgG1; kappa	αIR-1	HB-175
Insulin receptor, placental, human	mouse	IgG1	DII 33.1	CRL-1827
Integrin, alpha 1, human	mouse	IgG1	TS2/7.1.1	HB-245
Integrin, alpha 4, sheep	mouse	IgG2b	FW3-218-1	HB-261
Integrin, alpha 4/beta 7, mouse	rat/mouse	IgG2a	DATK32	HB-294
Integrin alpha V, integrin beta 3 (vitronectin receptor), human	mouse	IgG1 (kappa)	10C4.1.3	HB-11029
Integrin, beta 1 subunit, mouse	rat/mouse	IgG2a	KMI6	CRL-2179
Integrin, beta 1, human	mouse	IgG1	TS2/16.2.1	HB-243
Integrin, beta 1, sheep	mouse	IgG1	FW4-101-1-1	HB-289
Integrin, beta 2, mouse	hamster/mouse	IgG	2E6	HB-226
Integrin, beta 3, human	mouse	IgG1	AP-3	HB-242
Integrin, beta 7 Integrin, mouse	rat/mouse	IgG2a	FIB21	HB-295
Integrin, beta 7 Integrin, mouse	rat/mouse	IgG2a	FIB504.64	HB-293
Integrin, leukocyte, mouse	hamster/mouse	IgG	N418	HB-224

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Integrin-associated protein, human	mouse	IgG1	B6H12.2	HB-9771†
Integrin-like cellular adhesion molecule	rat/mouse	IgG2b	PS/2	CRL-1911
Intercellular adhesion molecule 1, mouse	rat	IgG2b	YN1/1.7.4	CRL-1878
Intercellular adhesion molecule 1, mouse	rat/mouse	IgG2a	BE29G1	HB-233
Interferon gamma receptor, mouse	rat/mouse	IgA; kappa	GR-96	CRL-2013
Interferon gamma receptor, mouse	rat/mouse	IgG2a; kappa	GR-20	CRL-2024
Interferon, gamma, human	mouse	IgG1	γ3-11.1	HB-8700†
Interferon, gamma, human	mouse	IgG1	IFGCP-F1BA10	HB-8291†
Interferon, gamma, mouse	rat/mouse	IgG1	R4-6A2	HB-170
Interleukin 1 beta, human	mouse	IgG1; kappa	ILB1-H21	HB-10220†
Interleukin 1 beta, human	mouse	IgG1; kappa	ILB1-H34	HB-10221†
Interleukin 1 beta, human	mouse	IgG1; kappa	ILB1-H6	HB-10219†
Interleukin 1 beta, human	mouse	IgG2b; kappa	ILB1-H67	HB-10222†
Interleukin 1 beta, recombinant, bovine	mouse	IgG1	SA22	CRL-2052
Interleukin 15, human	mouse	IgG1	hIL-15-M110	HB-12061†
Interleukin 15, human	mouse	IgG1	hIL-15-M111	HB-12062†
Interleukin 2 receptor, human	mouse	IgG1	2A3A1H	HB-8555†
Interleukin 2 receptor, human	mouse	IgG2a	7G7B6	HB-8784†
Interleukin 2 receptor, mouse	rat/mouse	IgM; kappa	7D4	CRL-1698
Interleukin 2 receptor, mouse	rat/mouse	IgG1	PC 61 5.3	TIB-222
Interleukin 2, mouse	rat/mouse	IgG2a	S4B6-1	HB-10968†
Interleukin 8 receptor type B (IL-8R-B), human	mouse	IgG2a	10H2.12.1	HB-11494†
Interleukin 8 receptor type B (IL-8R-B), human	mouse	IgG2a	4D1.5.7	HB-11495†
Interleukin 8, human	mouse	IgG1	EL-NC-1S	HB-9647†
Interleukin 8 (IL-8), human	mouse	IgG2a	A5.12.14	HB-11553†
Interleukin 8 (IL-8), rabbit	mouse	IgG2a	6G4.2.5	HB-11722†
Intermediate filaments	mouse	IgG1	α Intermediate Filament	TIB-131
Intracellular adhesion molecule 1 (ICAM-1), canine	mouse	IgG1	CL18/6	CRL-2518
Intracellular adhesion molecule 1 (ICAM-1), human	mouse	IgG2a	R6.5.D6.E9.B2	HB-9580†
Intracellular adhesion molecule 1 (ICAM-1), mouse	rat	IgG2b	YN1/1.7.4	CRL-1878
Intracellular adhesion molecule 1 (ICAM-1), mouse	rat/mouse	IgG2a	BE29G1	HB-233
Intracellular adhesion molecule 1 (ICAM-1), rat	mouse	IgG1	127H	HB-11911†
Invected protein, *Drosophila melanogaster*	mouse	IgG1	4D9D4	CRL-1818
J5 endotoxin core, *Escherichia coli*	mouse	IgG1	J5-1	HB-8297†
J5 endotoxin core, *Escherichia coli*	mouse	IgG1	J5-2	HB-8298†
K99 pilus, *Escherichia coli*	mouse	IgG1; kappa	2BD4E4 K99	HB-8178†
Kappa light chain (monotypic determinant), rat	mouse	IgG2b	RG7/9.1 HLK	TIB-169
Kappa light chain (RI-1a and RI-1b allotypes), rat	mouse	IgG2a; kappa	MAR 18.5	TIB-216
Kappa light chain [kappa 1b (LEW)], rat	mouse	IgG2a	RG7/7.6 HL	TIB-172
Kappa light chain, human	mouse	IgG1; kappa	141PF11	HB-45
Kappa light chain, human	mouse	IgG1	HP6053	CRL-1758
Kappa light chain, human	mouse	IgG1; kappa	TB 28-2	HB-61
Kappa light chain, mouse	rat/mouse	IgG1	187.1	HB-58
Kidney tubules, human	mouse	IgG1	DAL K20	CRL-2288
Kidney tubules, human	mouse	IgG1	DAL K29	CRL-2291
Kininogen heavy chain, human	mouse	IgG1	2B5	HB-8963†
Kininogen light chain, human	mouse	IgG1	C11C1	HB-8964†
Kunitz soybean trypsin inhibitor	mouse	IgG1; kappa	C129	HB-9516†
Kunitz soybean trypsin inhibitor	mouse	IgG1; kappa	C171	HB-9515†
Kunitz soybean trypsin inhibitor	mouse	IgG1; kappa	C180	HB-9517†
L d, D b and D q	mouse	IgG2a; kappa	28-14-8S	HB-27
L d, D q, L q and L b	mouse	IgG2a; kappa	30-5-7S	HB-31
L3T4 antigen (T cell), mouse	rat/mouse	IgG2b	GK1.5	TIB-207
La Crosse Virus, G1 envelope glycoprotein	mouse	IgG2b	807.15	CRL-2287
La Crosse Virus, G1 envelope glycoprotein	mouse	IgG1	807.31	CRL-2282
La Crosse Virus, G1 envelope glycoprotein	mouse	IgG2a	807.33	CRL-2290
La/SSB, bovine	mouse	IgG	La1	HB-8609†
LAM-1, human	mouse	IgG1	DREG200	HB-302
LAM-1, human	mouse	IgG1	DREG56	HB-300
Lambda 1 light chain, mouse	mouse	IgG1; kappa	LS-136	TIB-157
Lambda light chain, human	mouse	IgG2a	HP6054	CRL-1763

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Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Laminin	rat/mouse	IgG2b	2AB1-IA10	HB-8210†
LECAM, human	mouse	IgG1	DREG200	HB-302
LECAM, human	mouse	IgG1	DREG56	HB-300
Legionella pneumophila	mouse	IgG2a	LP3IIG2	HB-8472†
Legionella pneumophila serogroup 1	mouse	IgG3	Lp1 MAB 1	CRL-1765
Legionella pneumophila serogroup 1	mouse	IgG2b	Lp1 MAB 2	CRL-1770
Legionella pneumophila serogroup 1	mouse	IgG2b	Lp1 MAB 3	CRL-1767
Leptomeningeal cell, rat neural antigen-2, RAN-2)	mouse	IgG2a	Ran-2	TIB-119
Leptospira pomona type kennewicki	mouse	IgA	2D7F10	CRL-2025
Leu 200 glycoproteins, human	mouse	IgG2a; kappa	4C	HB-8311†
Leu-5	mouse	IgM	TM1	HB-169
Leu8, human	mouse	IgG1	DREG200	HB-302
Leu8, human	mouse	IgG1	DREG56	HB-300
Leu8, mouse	rat/mouse	IgG2a	MEL-14	HB-132
Leukocyte common antigen, human	mouse	IgG2a; kappa	GAP 8.3	HB-12
Leukocyte function antigen 1, alpha subunit, mouse	rat/mouse	IgG2a; kappa	M17/4.4.11.9 (new clone of M17/4.2)	TIB-217
Leukocyte function antigen 1, mouse	rat/mouse	IgG2b	FD441.8	TIB-213
LEW RT1.A	rat/mouse	IgM	WFL3C6.1	HB-8157†
LEW RT1.A	rat/mouse	IgM	WFL4F12.3	HB-8156†
Lewis a and b blood group antigens, human	mouse	IgG3	151-5-G2-12	HB-8322†
Lewis a and b blood group antigens, human	mouse	IgG3	151-5-G3-5	HB-8323†
Lewis a antigen	mouse	IgG1	BC9-E5	CRL-1670
Lewis a antigen	mouse	IgG2a; kappa	CA3-F4	CRL-1667
Lewis a antigen	mouse	IgG1; kappa	CF4-C4	CRL-1716
Lewis a blood group antigen, human	mouse	IgG3	151-6-A7-9	HB-8324†
Lewis b blood group antigen, human	mouse	IgG1	130-3-F7-5	HB-8326†
Lewis b blood group antigen, human	mouse	IgM	143-2-A6-11	HB-8325†
Lex (tumor-associated fucoganglioside)	mouse	IgM	FHCR-1-2624/FH6/ FHOT-1-3019	HB-8873†
LFA-1, beta subunit, mouse	rat/mouse	IgG2a; kappa	M18/2.a.12.7 (new clone of M18/2.a.8)	TIB-218
LFA-1, mouse	rat/mouse	IgG2b	FD441.8	TIB-213
LFA-1, mouse	rat/mouse	IgG2a; kappa	M17/4.4.11.9 (new clone of M17/4.2)	TIB-217
LFA-1, mouse	rat/mouse	IgG2b; kappa	M17/5.2	TIB-237
LGL-1	rat/mouse	IgG2a	4D11	HB-240
Lgp100a	rat/mouse	IgG2a	30-C7	TIB-106
Lipopolysaccharide, chlamydia	mouse	IgG3	L2I-6	HB-8705†
Lipoprotein H2, *Pseudomonas aeruginosa*	mouse	IgG1	MA1-6	CRL-1783
Lipoprotein receptor related protein (LRP), 515-kDa subunit, rabbit	mouse	IgG1	IgG-5D7	CRL-1938
Lipoprotein receptor related protein (LRP), 85-kDa subunit, rabbit	mouse	IgG1	IgG-1B3	CRL-1937
Lipoprotein receptor related protein (LRP), carboxy terminal	mouse	IgG1	IgG-11H4	CRL-1936
Low density lipoprotein (LDL) receptor, bovine	mouse	IgG1	9D9	CRL-1703
Low density lipoprotein (LDL) receptor, bovine	mouse	IgG2b	C7	CRL-1691
Low density lipoprotein (LDL) receptor, human	mouse	IgG1	IgG-4A4	CRL-1898
Low density lipoprotein (LDL), human	mouse	IgG1	B1B3	CRL-2249
Low density lipoprotein (LDL), human	mouse	IgG1	B1B6	CRL-2248
LPAM-1, mouse	rat/mouse	IgG2b	R1-2	HB-227
Lung cancer	mouse	IgG1	L18	HB-8628†
Lung cancer	mouse	IgM	L5	HB-8627†
Lung cancer, human	mouse	IgG2a; kappa	703D4	HB-8301†
Luteinizing hormone (hLH) beta core fragment, human	mouse	IgG1 (kappa)	B505	HB-12000†
Luteinizing hormone releasing hormone (LHRH), carboxy terminal	mouse	IgG1	USASK/DSIL-LHRH-A1	HB-9094†
Luteinizing hormone/chorionic gonadotropin (LH/hCG) receptor, human	mouse	IgG2a	FSHR-323	CRL-2689

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Luteinizing hormone/chorionic gonadotropin (LH/hCG) receptor, human	mouse	IgG1	LHR-1055	CRL-2687
Luteinizing hormone/chorionic gonadotropin (LH/hCG) receptor, human	mouse	IgG1	LHR-29	CRL-2685
Luteinizing hormone/chorionic gonadotropin (LH/hCG) receptor, human	mouse	IgG1	LHR-74	CRL-2686
Ly 6.2C, mouse	mouse	IgG1	143-4.2	CRL-1970
Lyb 2.1, mouse	mouse	IgG2b	10-1.D.2	TIB-165
Lyb 8.2, mouse	mouse	IgG1	Cy34.1.2	TIB-163
Lymphocyte function antigen 1 (LFA-1) alpha subunit, human	mouse	IgG1	TS1/22.1.1.13	HB-202
Lymphocyte function antigen 1 (LFA-1) beta subunit, human	mouse	IgG1	TS1/18.1.2.11	HB-203
Lymphocyte function antigen 1 (LFA-1), human	mouse	IgG1	TS2/4.1.1	HB-244
Lymphocyte function antigen 1, mouse	rat/mouse	IgG2b; kappa	M17/5.2	TIB-237
Lymphocyte function antigen 2 (LFA-2), human	mouse	IgG1	TS2/18.1.1	HB-195
Lymphocyte function antigen 3 (LFA-3), human	mouse	IgG1	TS2/9.1.4.3	HB-205
Lymphocyte Peyer's patch HEV adhesion molecule, mouse	rat/mouse	IgG2b	R1-2	HB-227
Lymphocyte surface receptor for endothelium, mouse	rat/mouse	IgG2a	MEL-14	HB-132
Lymphocyte, mouse	rat/mouse	IgM	GL7	HB-254
Lymphoma cells, canine	mouse	IgG2a	Hybridoma 231	HB-9401†
Lymphoma cells, canine	mouse	IgG1	Hybridoma 234	HB-9402†
Lymphoma cells, canine	mouse	IgG2a	Hybridoma 234 s.2a	HB-9403†
Lyt 2.2, mouse	mouse	IgM	83-12-5	CRL-1971
Lyt-1 (all alleles), mouse	rat/mouse	IgG2a	53-7.313	TIB-104
Lyt-2 (all alleles), mouse	rat/mouse	IgM	3.155	TIB-211
Lyt-2 (all alleles), mouse	rat/mouse	IgG2a	53-6.72	TIB-105
Lyt-2.1, mouse	mouse	IgG2a	116-13.1	HB-129
Lyt-2.2, mouse	mouse	IgM	41-3.48	HB-130
Lyt-2.2, mouse	mouse	IgM	HO-2.2	TIB-150
Lyt-2.2, mouse	rat/mouse	IgG2b	2.43	TIB-210
Mac-1, alpha chain, mouse	rat/mouse	IgG2b	M1/70.15.11.5.HL	TIB-128
Mac-1, beta subunit, mouse	rat/mouse	IgG2a; kappa	M18/2.a.12.7 (new clone of M18/2.a.8)	TIB-218
Mac-1, human	mouse	IgG1	LM2/1.6.11	HB-204
Mac-2, mouse	rat/mouse	IgG2a; kappa	M3/38.1.2.8 HL.2	TIB-166
Mac-3 (mouse macrophage antigen, 110-kDa glycoprotein)	rat/mouse	IgG1; kappa	M3/84.6.34	TIB-168
Macrophage, activated, mouse	rat/mouse	IgG2a	158.2	HB-8466†
Macrophage, human	mouse	IgG1; kappa	14E5	HB-174
Macrophage, mouse	rat/mouse	IgG2b	F4/80	HB-198
Macrophage, mouse	rat/mouse	IgG2b	M1/70.15.11.5.HL	TIB-128
Macrophage, mouse	rat/mouse	IgG2a; kappa	M3/38.1.2.8 HL.2	TIB-166
Macrophage, pig	mouse	IgG1; kappa	74-22-15	HB-142
Macrophage, pig	mouse	IgG2b; kappa	74-22-15A	HB-142.1
Macrophage, pig	mouse	IgM; kappa	76-5-28	HB-153
Macrophage, pig	mouse	IgM; kappa	76-6-7	HB-141
MAdCAM-1, mouse	rat/mouse	IgG2a	MECA-367	HB-9478†
MAdCAM-1, mouse	rat/mouse	IgG2a	MECA-89	HB-292
Malignant cultured cells, human	mouse	IgM	B5 NIH	HB-10569†
Mammalian H-Y antigen	mouse	IgM; kappa	HY3-11.27	HB-8116
Mammalian sperm acrosomal vesicle	mouse	IgG1	HS-21 (subclone 1H3)	HB-255
Mammalian splicing factor (SC35)	mouse	IgG1	anti-SC35	CRL-2031
Mammary carcinoma cell line, human	mouse		UCD/AB 6.01	HB-8693†
Mammary carcinoma cell line, human	mouse		UCD/AB 6.11	HB-8458†
Mammary tumor cell cytoplasmic antigen, human	mouse	IgG1	3B18	HB-8654†
Mammary tumor cells, human	mouse	IgM	B25.2	HB-8107†
Mammary tumor cells, human	mouse	IgG1	B38.1	HB-8110†

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Mammary tumor cells, human	mouse	IgG1	B6.2	HB-8106†
Mammary tumor cells, human	mouse	IgG1	B72.3	HB-8108†
Medullary thymic epithelium, mouse	rat/mouse	IgM	MD2	HB-229
Melanoma associated antigens, human	mouse	IgG	WI-MN-1	HB-8672†
Melanoma cell line, human (M-1 antigen system)	mouse	IgG1	LI 27	HB-8437†
Melanoma cell line, human (M-11 antigen system)	mouse	IgG2a	AL 1-27	HB-8441†
Melanoma cell line, human (M-12 antigen system)	mouse	IgG1	LI 66	HB-8442†
Melanoma cell line, human (M-13 antigen system)	mouse	IgG1	E 20	HB-8443†
Melanoma cell line, human (M-16 antigen system)	mouse	IgM	K 114	HB-8444†
Melanoma cell line, human (M-18 antigen system)	mouse	IgG3	R_{24}	HB-8445†
Melanoma cell line, human (M-19 antigen system)	mouse	IgG1	L235	HB-8446†
Melanoma cell line, human (M-20 antigen system)	mouse	IgG2a	L101	HB-8447†
Melanoma cell line, human (M-23 antigen system)	mouse	IgG1; kappa	L230	HB-8448†
Melanoma cell line, human (M-26 antigen system)	mouse	IgG1	A123	HB-8451†
Melanoma cell line, human (M-27 antigen system)	mouse	IgM	A124	HB-8452†
Melanoma cell line, human (M-28 antigen system)	mouse	IgG2a	B5	HB-8453†
Melanoma tumor-specific antigen, human	mouse	IgG2a	XMMME-001	HB-8759†
Melanoma tumor-specific antigen, human	mouse	IgG2a	XMMME-002	HB-8760†
Mesothelial and ciliated cell protein, 130 kDa, human and rat	mouse	IgM; kappa	anti-130-kDa Mesothelial-Ciliated Cells	CRL-2401
Microglobulin, beta-2, human	mouse	IgG2b	BBM.1	HB-28
Microglobulin, beta-2, human	mouse	IgG1; kappa	L368	HB-149
Microglobulin, beta-2, rat	mouse	IgG1	4C9	CRL-2437
Monocyte Fc receptor (high affinity, FcRI), human	mouse	IgG1	32.2	HB-9469†
Monocyte, human	mouse	IgG2b	3C10	TIB-228
Monocyte, human	mouse	IgG2a; kappa	4F2C13	HB-22
Monocyte, human	mouse	IgG1	63D3	HB-44
Monocyte, human	mouse	IgM; kappa	MMA	HB-78
Monocyte-derived neutrophil chemotactic factor, human	mouse	IgG1	EL-NC-1S	HB-9647†
Mononuclear cells, human	mouse	IgG2b	OKM 1	CRL-8026
MOPC167 idiotype (V kappa 24)	rat/mouse	IgG1 and IgG2a	28-6-20	CRL-2489
Mu heavy chain, human	mouse	IgG1; kappa	DA4-4	HB-57
Mu heavy chain, mouse	rat/mouse	IgG2b	331.12	TIB-129
Multidrug resistance protein (MRP)	mouse	IgG1	QCRL-1	HB-11765†
Multidrug resistance protein (MRP)	mouse	IgG2a	QCRL-3	HB-11766†
Muscle, heart	mouse	IgG2a; kappa	356-1	HB-181
myb (c-*myb*), chicken	mouse	IgG2b	MYB 2-3.76	CRL-1728
myb (c-*myb*), chicken	mouse	IgG2b	MYB 2-37.63	CRL-1726
myb (c-myb), chicken	mouse	IgG1	MYB 2-7.77	CRL-1724
myb (v-myb)	mouse	IgG2b	MYB 2-3.76	CRL-1728
myb (v-*myb)*	mouse	IgG2b	MYB 2-37.63	CRL-1726
myb (v-*myb)*	mouse	IgG1	MYB 2-7.77	CRL-1724
myc (c-*myc)* protein, human	mouse	IgG1	MYC 1-9E10.2	CRL-1729
myc (c-*myc)* protein, human	mouse	IgG1	MYC CT 14-G4.3	CRL-1727
myc (c-*myc)* protein, human	mouse	IgG1	MYC CT 9-B7.3	CRL-1725
Myeloid cell antigen, human	mouse	IgG1; kappa	Anti-My-10 clone 28/8/8/14/4	HB-8483†
Myeloid leukemia (CD33), human	mouse	IgG2a	M195	HB-10306†
Myocardium	mouse	IgG2a; kappa	356-1	HB-181
Myosin heavy chain, adult, human	mouse	IgG2a	A4.1025	CRL-2044
Myosin heavy chain, adult, slow, human and rodent	mouse	IgM	A4.840	CRL-2043
Myosin heavy chain, cardiac alpha, rat	mouse	IgG2b	BA-G5	HB-276
Myosin heavy chain, embryonic, human and rodent	mouse	IgG1	F1.652	CRL-2039
Myosin heavy chain, embryonic, rat	mouse	IgG1	BF-45	HB-278
Myosin heavy chain, embryonic, rat	mouse	IgG1	BF-B6	HB-279
Myosin heavy chain, fast IIa, human and rodent	mouse	IgG1	N2.261	CRL-2047
Myosin heavy chain, fast IIa, rodent	mouse	IgG1	A4.74	CRL-2041
Myosin heavy chain, fast IIa, rodent	mouse	IgM	N1.551	CRL-2040
Myosin heavy chain, fast, human	mouse	IgG1	A4.74	CRL-2041
Myosin heavy chain, neonatal and adult fast, human	mouse	IgM	N3.36	CRL-2042

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Myosin heavy chain, slow, human and rodent	mouse	IgG1	A4.951	CRL-2046
Myosin heavy chain, slow, human and rodent	mouse	IgG1	N2.261	CRL-2047
Myosin heavy chain, type 1, rat	mouse	IgG1	BA-D5	HB-287
Myosin heavy chain, type 2A, rat	mouse	IgG1	SC-71	HB-277
Myosin heavy chain, type 2B, rat	mouse	IgM	BF-F3	HB-283
NAP-1 (neutrophil attractant/activation protein 1)	mouse	IgG1	EL-NC-1S	HB-9647†
Nerve growth factor (NGF) receptor, primate	mouse	IgG1	200-3-G6-4 (20.4)	HB-8737†
Neuroblastoma, human	mouse	IgM	PI 153/3	TIB-198
Neutrophil attractant/activation protein 1, human	mouse	IgG1	EL-NC-1S	HB-9647†
Neutrophils, mouse	rat/mouse	IgM	J11d.2	TIB-183
nG4m(b) isoallotope, human	mouse	IgG1	HP6016	CRL-1787
Nicotinic acetylcholine receptor, *Torpedo californica*	mouse	IgG1	88B	CRL-1967
NK cell antigen, mouse (LGL-1)	rat/mouse	IgG2a	4D11	HB-240
NK cell target ligand on NC-37 cells	mouse	IgM	18C2.8.3	HB-9571†
NK cell target ligand on NC-37 cells	mouse	IgM	7C6.5.4	HB-9574†
NK cells, human	mouse	IgM; kappa	HNK-1	TIB-200
NK cells, mouse	mouse	IgG2a	PK136	HB-191
Non-small cell lung carcinoma (NSCLC), human	mouse	IgG1	L18	HB-8628†
Non-small cell lung carcinoma (NSCLC), human	mouse	IgM	L5	HB-8627†
O-antigen, *Escherichia coli* O157	mouse	IgM	MARC 29F8	CRL-2508
O-antigen, *Escherichia coli* O157	mouse	IgM	MARC S5	CRL-2507
OKT-10 like molecule, human	mouse	IgG1	THB-7	HB-136
o-Phosphotyrosine	mouse	IgG1; kappa	2G8.D6	HB-8190†
Ornithine decarboxylase (ODC), mouse	mouse	IgM	B11	HB-8372†
Ovarian carcinoma cell line (2774), human	mouse	IgG1	ME195	HB-8431†
Ovarian carcinoma cell line (2774), human	mouse	IgG2a	MF 116	HB-8411†
Ovarian carcinoma cell lines, human	mouse	IgM	MH55	HB-8412†
Ovarian carcinoma, human	mouse	IgG2a; IgG2b	OVB-3	HB-9147†
Oxysterol binding protein	mouse	IgG2a	IgG-B16	CRL-1899
Oxysterol binding protein (OSBP), rabbit	mouse	IgG1	IgG-11H9	CRL-2213
Oxytocin-neurophysin (NP-OT), rat	mouse	IgG2b; kappa	PS 38	CRL-1950
Oxytocin-neurophysin (NP-OT), rat	mouse	IgG2b; kappa	PS 60	CRL-1800
Oxytocin-neurophysin (NP-OT), rat	mouse	IgG2a; kappa	PS 67	CRL-1797
p12 *gag* protein of murine leukemia viruses (MuLV)	mouse	IgG2b	548	CRL-1890
p15 *gag* protein of murine leukemia viruses (MuLV)	mouse	IgG2b	34	CRL-1889
p15E *env* protein of murine leukemia viruses (MuLV)	mouse	IgG3	372	CRL-1893
p30 *gag* protein of murine leukemia virus (MuLV)	rat/mouse	IgG1	R187	CRL-1912
Parainfluenzavirus type 3, fusion glycoprotein (F), human	mouse	IgG1	9-4-3	HB-8935†
Parainfluenzavirus type 3, hemagglutinin (HN), human	mouse	IgG2a	13-5-9-6-2	HB-8934†
Paramyosin, *Schistosoma mansoni*	mouse	IgG2a	MBL-Sm-1A6	HB-194
Paramyosin, *Schistosoma mansoni*	mouse	IgG2a	MBL-Sm-4B1	HB-193
Pasturella multocida type D dermonecrotic toxin	mouse	IgG1	1B2A3	CRL-1965
PDGF B, v-*sis* form	mouse	IgG2a	116	HB-9367†
PDGF B, v-*sis* form	mouse	IgG2b	232	HB-9372†
PDGF B, v-*sis* form	mouse	IgG1	52	HB-9361†
Peptidoglycan, bacterial	mouse	IgG3; kappa	15B2	HB-8510†
Peptidoglycan, bacterial	mouse	IgG1; kappa	3C11	HB-8511†
Peptidoglycan, bacterial	mouse	IgM; kappa	3F6	HB-8512†
Peptidoglycan, bacterial	mouse	IgM; lambda	3G3	HB-8516†
Periostin	mouse	IgG1; kappa	5H8	CRL-2646
PETA-3 (CD151)	mouse	IgG1	41-2	CRL-2695
PETA-3 (CD151)	mouse	IgG1	50-6	CRL-2696
Peyer's patch endothelial cells, human	mouse	IgG2a	Hermes-3	HB-9480†
Peyer's patch endothelial cells, mouse	rat/mouse	IgG2a	MECA-367	HB-9478†
P-glycoprotein, human	mouse	IgG2b	443-17F9-1C6	CRL-2694
Pgp-1 glycoprotein, mouse	rat/mouse	IgG2b	IM7.8.1	TIB-235
Pgp-1, mouse	rat/mouse	IgG1	KM114	TIB-242
Pgp-1, mouse	rat/mouse	IgG1	KM201	TIB-240
Pgp-1, mouse	rat/mouse	IgG2a	KM703	CRL-1896

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Pgp-1, mouse	rat/mouse	IgG2a	KM81	TIB-241
Phenylarsonate	mouse	IgE	SE-1.3	HB-137
Phosphatidylinositol 4-kinase, type II, bovine	mouse	IgG1; kappa	4C5G	CRL-2538
Phosphotyrosine	mouse	IgG1; kappa	2G8.D6	HB-8190†
Phosphotyrosine	mouse	IgG3; kappa	FB2	CRL-1891
Phosphotyrosine	mouse	IgG1	P-tyr-1	CRL-1955
Plasmodium falciparum merozoite antigen	mouse	IgG2b	MAb 5.2	HB-9148
Platelet glycoprotein GPIIIa, human	mouse	IgG1; kappa	LK-4	CRL-2345
Platelet-derived growth factor B chain (PDGF B, v-*sis* form)	mouse	IgG2a	116	HB-9367†
Platelet-derived growth factor B chain (PDGF B, v-*sis* form)	mouse	IgG2b	232	HB-9372†
Platelet-derived growth factor B chain (PDGF B, v-*sis* form)	mouse	IgG1	52	HB-9361†
Platelets, human	mouse	IgG1	7E3	HB-8832†
p-nitroanaline amide derivatives	mouse	IgG1	P3 6D4 (SCRF 43.1)	HB-9168†
p-nitroanaline amide derivatives	mouse	IgG1	P3 8D2 (SCRF 43.1)	HB-9169†
p-nitroanaline amide derivatives	mouse	IgG1	QPN1 12C9 (SCRF 43.2)	HB-9500†
p-nitroanaline amide derivatives	mouse	IgG1	QPN1 22F5 (SCRF 43.2)	HB-9509†
Polypeptide, synthetic	mouse	IgM	7C8	HB-8465†
Polypeptide, synthetic, Asp-Tyr-Lys-Asp-Asp-Asp-Asp-Lys	mouse	IgG2b	4E11	HB-9259†
Polypyrimidine tract binding protein (PTB)	mouse	IgG2b; kappa	mAb BB7	CRL-2501
Pig parvovirus (PPV)	mouse	IgG1	3C9-D11-H11	CRL-1745
Primate tissue, normal	mouse	IgM	B5 NIH	HB-10569†
Prostate antigen (PA), human	mouse	IgM; kappa	F5-A-1/22.8.13	HB-8051†
Prostate antigen (PA), human	mouse	IgG1	RLSD06	HB-8527†
Prostate antigen (PA), human	mouse	IgG1	RLSD09	HB-8525†
Prostate cancer antigen, human	mouse	IgG1	7E11C5	HB-10494†
Prostate cancer, human	mouse	IgG3	P25.48	HB-9119†
Prostate epithelial cells	mouse/mouse	IgG1	Prost 410	HB-11426†
Prothrombin, abnormal, human	mouse	IgG1	JO1-1	HB-8638†
P-selectin, human	mouse	IgG1	WAPS 12.2	HB-299
Pseudomonas aeruginosa (flagella type b)	human		20H11	CRL-9300†
Pseudomonas aeruginosa lipopolysaccharide (LPS) Fisher immunotype 1 (IATS type 6)	human	IgM	C5B7	CRL-8753†
Pseudomonas aeruginosa lipopolysaccharide (LPS) Fisher immunotype 4 (IATS type 1)	human	IgM	9D10	CRL-8752†
Pseudomonas aeruginosa lipopolysaccharide (LPS) Fisher immunotype 7	human	IgM	8E7	CRL-8795†
Pseudorabies virus (PRV)	mouse	IgG2b	3G9F3	CRL-1843
Pseudorabies virus (PRV)	mouse	IgG2b	6D8MB4	CRL-1842
Qa-1b, mouse	mouse	IgG1 (kappa)	4C2.4A7.5H11	CRL-2744
Qa-1b, mouse	mouse	IgG1 (kappa)	6A8.6F10.1A6	CRL-2743
RAN-2 (rat neural antigen-2)	mouse	IgG2a	Ran-2	TIB-119
ras (c-ras) protein, p21	rat	IgG2a	Y13-238	CRL-1741
ras (c-ras) protein, p21	rat	IgG1	Y13-259	CRL-1742
ras (v-*ras* K) oncogene peptide, synthetic	mouse	IgG1 and IgG2b	147-67C6	CRL-2654
ras (v-*ras*) protein, p21	rat	IgG2a	Y13-238	CRL-1741
ras (v-*ras)* protein, p21	rat	IgG1	Y13-259	CRL-1742
ras oncogene peptide, synthetic	mouse	IgG1; kappa	146-03E04	CRL-2650
ras, H/N, peptide, synthetic	mouse	IgG1; kappa	142-24E5	CRL-2649
ras, Ha, p21	mouse	IgG1	MX	HB-9158†
Rat neural antigen-2 (RAN-2)	mouse	IgG2a	RAN-2	TIB-119
Receptor, 1,25-dihydroxy vitamin D3, pig	mouse	IgG1	XVI E6E6G10	HB-9496†
Receptor, acetylcholine, neuronal, chicken	rat/mouse	IgG2a	mAb 270	HB-189
Receptor, acetylcholine, neuronal, rat	rat/mouse	IgG2a	mAb 270	HB-189
Receptor, CD28, mouse	hamster/mouse	IgG	PV1	HB-12352†
Receptor, complement, type 3 (CR3), mouse	rat/mouse	IgG2b	5C6 Clone 1	CRL-1969
Receptor, Coxsackievirus-adenovirus, human	mouse	IgG1	RmcB	CRL-2379
Receptor, epidermal growth factor (EGF)	mouse	IgG1	225	HB-8508†

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Receptor, epidermal growth factor (EGF)	mouse	IgG1	455	HB-8507†
Receptor, epidermal growth factor (EGF)	mouse	IgG2a	528	HB-8509†
Receptor, epidermal growth factor (EGF)	mouse	IgG	579	HB-8506†
Receptor, epidermal growth factor (EGF), human	mouse	IgG2a; kappa	Mab 108	HB-9764†
Receptor, epidermal growth factor (EGF), human	mouse	IgM	Mab 96	HB-9763†
Receptor, Epstein-Barr virus (EBV)	mouse	IgG2a; kappa	THB-5	HB-135
Receptor, Fc alpha, human	mouse	IgM	My 43.51	HB-12128†
Receptor, follicle stimulating hormone (FSH), human	mouse	IgG1	FSHR-18	CRL-2688
Receptor, insulin, human	mouse	IgG1; kappa	αIR-1	HB-175
Receptor, insulin, placental, human	mouse	IgG1	DII 33.1	CRL-1827
Receptor, interferon gamma, mouse	rat/mouse	IgG2a; kappa	GR-20	CRL-2024
Receptor, interferon gamma, mouse	rat/mouse	IgA; kappa	GR-96	CRL-2013
Receptor, interleukin 12 (IL-12), beta 1 subunit, human	rat/mouse	IgG2a	HIL12R1.2B10	CRL-2359
Receptor, interleukin 2 (IL-2), human	mouse	IgG1	2A3A1H	HB-8555†
Receptor, interleukin 2 (IL-2), human	mouse	IgG2a	7G7B6	HB-8784†
Receptor, interleukin 2 (IL-2), mouse	rat/mouse	IgM; kappa	7D4	CRL-1698
Receptor, interleukin 2 (IL-2), mouse	rat/mouse	IgG1	PC 61 5.3	TIB-222
Receptor, interleukin 8, type B, human	mouse	IgG2a	10H2.12.1	HB-11494†
Receptor, interleukin 8, type B, human	mouse	IgG2a	4D1.5.7	HB-11495†
Receptor, luteinizing hormone/chorionic gonadotropic (LH/hCG), human	mouse	IgG2a	FSHR-323	CRL-2689
Receptor, luteinizing hormone/chorionic gonadotropic (LH/hCG), human	mouse	IgG1	LHR-1055	CRL-2687
Receptor, luteinizing hormone/chorionic gonadotropic (LH/hCG), human	mouse	IgG1	LHR-29	CRL-2685
Receptor, luteinizing hormone/chorionic gonadotropic (LH/hCG), human	mouse	IgG1	LHR-74	CRL-2686
Receptor, nerve growth factor (NGF), primate	mouse	IgG1	200-3-G6-4 (20.4)	HB-8737†
Receptor, stem cell factor (SCF), human	mouse	IgG2a	BA7.3C.9	HB-10716†
Receptor, transferrin, human	mouse	IgG2a	L5.1	HB-84
Receptor, transferrin, human	mouse	IgG1	OKT 9	CRL-8021
Receptor, transferrin, mouse	rat/mouse	IgM	R17 208.2	TIB-220
Receptor, transferrin, mouse	rat/mouse	IgG2a	R17 217.1.3	TIB-219
Receptor, vascular endothelial growth factor (VEGF), mouse	rat/mouse	IgG1; kappa	DC101	HB-11534†
Receptor, very low density lipoprotein (VLDL)	mouse	IgG1	IgG-6A6	CRL-2197
Receptor, vitonectin, human	mouse	IgG1	B6H12.2	HB-9771†
Red blood cells, sheep	mouse	IgM; lambda	N-S.2.1	TIB-108
Red blood cells, sheep	mouse	IgM; kappa	N-S.4.1	TIB-110
Red blood cells, sheep	mouse	IgG3; kappa	N-S.7	TIB-114
Red blood cells, sheep	mouse	IgG2b	N-S.8.1	TIB-109
Red blood cells, sheep	mouse	IgG2a; kappa	S-S.1	TIB-111
Red blood cells, sheep	mouse	IgM; kappa	S-S.3	TIB-112
Renal carcinoma cell lines, human	mouse	IgG1	ME195	HB-8431†
Renal carcinoma cell lines, human	mouse	IgG2a	MF 116	HB-8411†
Renal cell carcinoma, human	mouse	IgG1	DAL K20	CRL-2288
Renal cell carcinoma, human	mouse	IgG1	DAL K29	CRL-2291
Renal cell carcinoma, human	mouse	IgG1	DAL K45	CRL-2292
Renin, hog	mouse	IgG1	F32 VIII C4	CRL-1653
Reovirus type 3, sigma 1 hemagglutinin	mouse	IgG2a	9BG5	HB-167
REP-1, human	mouse	IgG1	IgG-2F1	CRL-2419
Retinal Muller cell, rat	mouse	IgG2a	RAN-2	TIB-119
Retinoblastoma, human	mouse	IgM	PI 153/3	TIB-198
Ricin, A chain (A1 and A2)	mouse	IgG1	TFTA1	CRL-1771
Ricin, B chain	mouse	IgG1	TFTB1	CRL-1759
RNA-DNA hybrids	mouse	IgG	S9.6	HB-8730†
Saccharide antigen, Gal beta1-3GalNAc (T antigen)	mouse	IgG3; kappa	JAA-F11	CRL-2381
Saxitoxin binding component of electroplex membrane	mouse	IgG1	VD-10	HB-68
Sca-1, mouse	rat/mouse	IgG2a	E13 161-7	HB-215

* Part of the NBL collection; see page12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
SCAP	mouse	IgG2b	IgG-9D5	CRL-2347
Schistosoma mansoni surface (cercariae) glycoprotein	mouse	IgA	129A3/1	HB-8087†
Schistosoma mansoni surface (cercariae) glycoprotein	mouse	IgG1	130C3/2B/8	HB-8088†
Schistosoma mansoni surface (cercariae) glycoprotein	mouse	IgG1	132C4A/4	HB-8086†
L-Selectin, human	mouse	IgG1	DREG200	HB-302
L-Selectin, human	mouse	IgG1	DREG56	HB-300
L-Selectin, mouse	rat/mouse	IgG2a	MEL-14	HB-132
L-Selectin, sheep and bovine	mouse	IgG1	DU1-29	HB-263
Sex lethal gene product (Sxl), female specific, *Drosophila melanogaster*	mouse	IgG1	mSXL 104	CRL-1953
Sex lethal gene product (Sxl), female specific, *Drosophila melanogaster*	mouse	IgG1	mSXL 114	CRL-1954
Sex lethal gene product (Sxl), female specific, *Drosophila melanogaster*	mouse	IgG1	mSXL 18	CRL-1952
Sex lethal gene product (Sxl), female specific, *Drosophila melanogaster*	mouse	IgG1	mSXL 5	CRL-1951
Shiga toxin	mouse	IgG1; kappa	13C4	CRL-1794
Shiga-like toxin I (SLTI)	mouse	IgG1; kappa	13C4	CRL-1794
Shiga-like toxin II (SLT-II)	mouse	IgG1; kappa	11E10	CRL-1907
Shiga-like toxin II (SLT-II)	mouse	IgG2a; kappa	11F11	CRL-1908
SLA a, c, d	mouse	IgG2a	7-34-1	CRL-1945
SLA ABd (pig histocompatibility antigen)	mouse	IgG2b; kappa	74-11-10	HB-139
SR proteins (pre-mRNA splicing factors)	mouse	IgG1	anti-SR (1H4)	CRL-2383
SR proteins (pre-mRNA splicing factors)	mouse	IgM	MAb104	CRL-2067
SR proteins, conserved epitope	mouse	IgG1	16H3	CRL-2385
src (v-*src)* oncogene peptide, synthetic	mouse	IgG1	201-45E9	CRL-2670
src (v-*src)* oncogene peptide, synthetic	mouse	IgG2a; IgG2b	203-7D10	CRL-2651
src/yes oncogene peptide, synthetic	mouse	IgG1	202-11A8	CRL-2669
SREBP cleavage activating protein	mouse	IgG2b	IgG-9D5	CRL-2347
SREBP-2, hamster	mouse	IgG2b	IgG-7D4	CRL-2198
SRp20 proteins (pre-mRNA splicing factors)	mouse	IgG1	anti-SRp20 (7B4)	CRL-2384
Stem cell antigen 1, mouse (Sca-1)	rat/mouse	IgG2a	E13 161-7	HB-215
Stem cell factor (SCF) receptor, human	mouse	IgG2a	BA7.3C.9	HB-10716†
Stem cells, mesenchymal, human	mouse	IgG1	SH2	HB-10743†
Stem cells, mesenchymal, human	mouse	IgG2b	SH3	HB-10744†
Stem cells, mesenchymal, human	mouse	IgG1	SH4	HB-10745†
Sterol regulatory element binding protein (dSREBP), *Drosophila melanogaster*	mouse	IgG1; kappa	IgG-3B2	CRL-2693
Sterol regulatory element binding protein (SREBP), human	mouse	IgG1	IgG-2A4	CRL-2121
Sterol regulatory element binding protein 2 (SREBP-2), hamster	mouse	IgG2b	IgG-7D4	CRL-2198
Sterol regulatory element binding protein 2 (SREBP-2), human	mouse	IgG1	IgG-1C6	CRL-2224
Sterol regulatory element binding protein 2 (SREBP-2), human	mouse	IgG1; kappa	IgG-1D2	CRL-2545
Streptococcus mutans	mouse	IgG2a; kappa	SWLA1	HB-12559†
Streptococcus mutans	mouse	IgG2a; kappa	SWLA2	HB-12560†
Streptococcus mutans	mouse		SWLA3	HB-12558†
Surface membranes of cancer cells	mouse	IgG1 (kappa)	IMM002.69.47.4	CRL-13007†
SV40 T antigen	mouse	IgG2a	PAb 101	TIB-117
SV40 T antigen	mouse	IgG1	PAb 100	TIB-115
SV40 T antigen, N terminal	mouse	IgG2a	PAb 108	TIB-230
SV40 T antigen, N terminal	mouse	IgG2a	PAb 108	TIB-230
Swine leucocyte antigen (SLA)	mouse	IgG2a	7-34-1	CRL-1945
T antigen, N terminal, SV40	mouse	IgG2a	PAb 108	TIB-230
T antigen, non-viral (NVT), mouse	mouse	IgG2b	PAb 122	TIB-116
T antigen, SV40	mouse	IgG2a	PAb 101	TIB-117

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
T antigen, SV40	mouse	IgG1	PAb 100	TIB-115
T cell (activated), human	mouse	IgG1	10D2F6	HB-11103†
T cell (activated), human	mouse	IgG1	OKT 9	CRL-8021
T cell antigen receptor (Jurkat cells), human	mouse	IgM; kappa	C305	CRL-2424
T cell antigen receptor, gamma/delta negative, sheep	mouse	IgG1; kappa	86D	HB-286
T cell antigen receptor, human, major framework determinant	mouse	IgG1	(BF1) 8A3.31	HB-9283†
T cell antigen receptor, human, major framework determinant	mouse	IgG2a	W4F.5B	HB-9282†
T cell antigen receptor, mouse	hamster/mouse	IgG	H57-597	HB-218
T cell antigen receptor, mouse	rat/mouse	IgG2b	TR 310	HB-219
T cell precursor, human	mouse	IgG1	OKT 10	CRL-8022†
T cell receptor	mouse	IgG1	1G12	CRL-2827
T cell receptor, gamma/delta, mouse	hamster/mouse	IgG	UC3-10A6	CRL-1988
T cell receptor, gamma/delta, mouse	hamster/mouse	IgG	UC7-13D5	CRL-1989
T cells, cytotoxic, pig	mouse	IgG2a; kappa	76-2-11	HB-143
T cells, cytotoxic/suppressor, human	mouse	IgG1	OKT 5	CRL-8013†
T cells, cytotoxic/suppressor, human	mouse	IgG1	OKT 5	CRL-8016†
T cells, cytotoxic/suppressor, human	mouse	IgG2a	OKT 8	CRL-8014
T cells, gamma/delta positive, bovine	mouse	IgG1	IL-A29	CRL-1874
T cells, helper/inducer, human	mouse	IgG2b	OKT 4	CRL-8002†
T cells, helper/inducer, mouse	rat/mouse	IgG2b	GK1.5	TIB-207
T cells, human	mouse	IgM	2T8-3E10	HB-8213†
T cells, human	mouse	IgM	3Pt12B8	HB-8136†
T cells, human	mouse	IgG1; kappa	5E9C11	HB-21
T cells, human	mouse	IgG1	OKT 1	CRL-8000†
T cells, human	mouse	IgG1	OKT 11	CRL-8027†
T cells, human	mouse	IgG2a	OKT 3	CRL-8001†
T cells, human	mouse	IgG1; kappa	T3-3A1	HB-2
T cells, mouse	mouse	IgM; kappa	20-10-5S	HB-23
T cells, pig	mouse	IgM; kappa	76-5-28	HB-153
T cells, pig	mouse	IgM; kappa	76-6-7	HB-141
T cells, rabbit	mouse	IgM	9AE10	CRL-1761
T cells, rabbit	mouse	IgG1	L11/135	TIB-188
T12 (120 kDa) antigen, human T cells	mouse	IgM	3Pt12B8	HB-8136†
T15 idiotype	mouse	IgG1; kappa	AB1-2	HB-33
TAG-72 (tumor-associated glycoprotein), human	mouse	IgG1; kappa	CC 49	HB-9459†
T-B activating molecule (T-BAM), human	mouse	IgG2a	5c8	HB-10916†
Tetanus toxin	human/mouse	IgG1	9F12	HB-8177†
Tetanus toxoid	human	IgG; kappa	SA13	HB-8501†
TGF-beta-2, mouse	mouse	IgG1	1D11.16.8	HB-9849†
Theophylline	mouse	IgG1; kappa	17/14	HB-8153†
Theophylline	mouse	IgG1; kappa	30/15	HB-8152†
Theophylline	mouse	IgG1; kappa	61/7	HB-8154†
Thy-1 antigen, human	mouse	IgG1	K117	HB-8553†
Thy-1 antigen, mouse	mouse	IgM	HO-22-1	TIB-100
Thy-1 antigen, mouse	rat/mouse	IgG2a	M5/49.4.1	TIB-238
Thy-1.1 antigen, mouse	mouse	IgM	T11D7e2	TIB-103
Thy-1.2 antigen, mouse	mouse	IgM	HO-13-4	TIB-99
Thy-1.2 antigen, mouse	rat/mouse	IgG2b	30-H12	TIB-107
Thy-1.2 antigen, mouse	rat/mouse	IgM	J1j.10	TIB-184
Thymic lymphocyte, human	mouse	IgG1	OKT 6	CRL-8020†
Thymocyte (E rosette positive), human	mouse	IgG1	OKT 11	CRL-8027†
Thymocyte, human	mouse	IgG2a	A1G3	HB-177
Thymocyte, human	mouse	IgG1	OKT 6	CRL-8020†
Thymocytes, rabbit	mouse	IgM	9AE10	CRL-1761
Thymus, cortical epithelium, human	mouse	IgG2b	CDR2	HB-214
Thymus, cortical epithelium, human	mouse	IgG2	TE3	HB-209
Thymus, cortical epithelium, human	mouse	IgM	TE4	HB-207
Thymus, epithelium, human	mouse	IgM	TE15	HB-206
Thymus, epithelium, human	mouse	IgG1	TE16	HB-210

* Part of the NBL collection; see page12. † Patent item; see page 12.
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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
Thymus, epithelium, human	mouse	IgM	TE19	HB-211
Thymus, epithelium, human	mouse	IgG2a	TE8	HB-212
Thymus, human	mouse	IgG1	TE7	HB-208
Thyroid stimulating hormone (TSH) receptor alpha subunit, human	mouse	IgG1	TSHR-R5T-44	CRL-2681
Thyroid stimulating hormone (TSH) receptor alpha subunit, human	mouse	IgG1	TSHR-T5-51	CRL-2680
Thyroid stimulating hormone (TSH) receptor alpha subunit, human	mouse	IgG1	TSHR-T5U-317	CRL-2682
Thyroid stimulating hormone (TSH) receptor beta subunit, human	mouse	IgG1	TSHR-R5T-34	CRL-2683
Thyroid stimulating hormone (TSH) receptor beta subunit, human	mouse	IgG2a	TSHR-T3-365	CRL-2684
L-Thyroxine (T4, 3,5,3',5'-tetraiodo-L-thyronine)	mouse	IgG1	T4 Clone 5 (10-0101, 0062-83)	HB-8500†
Ti1b antigen, human	mouse	IgM	2T8-3E10	HB-8213†
TL antigen, mouse	mouse	IgG2a	I(TL.m9)	HB-131
TL antigen, mouse	rat/mouse	IgG2a	HD168	HB-252
Transferrin receptor, human	mouse	IgG2a	L5.1	HB-84
Transferrin receptor, human	mouse	IgG1	OKT 9	CRL-8021
Transferrin receptor, mouse	rat/mouse	IgM	R17 208.2	TIB-220
Transferrin receptor, mouse	rat/mouse	IgG2a	R17 217.1.3	TIB-219
Transforming growth factor-beta2, mouse	mouse	IgG1	1D11.16.8	HB-9849†
Treponema pallidum	mouse	IgM	1939-3G5	HB-8133†
Treponema pallidum	mouse	IgG1	1939-8G2	HB-8134†
Trichinella spiralis	mouse	IgM	$7C_2C_8C_{12}$	HB-8678†
Trifucosylated type 2 chain glycolipids	mouse	IgM	FHCR-1-2075/FH5	HB-8770†
2,4,6-Trinitrophenyl (TNP)	mouse	IgG1	1B7.11	TIB-191
2,4,6-Trinitrophenyl (TNP)	mouse	IgA	2F.11.15	TIB-194
2,4,6-Trinitrophenyl (TNP)	mouse	IgE (Iga haplotype)	IGEL a2	TIB-142
2,4,6-Trinitrophenyl (TNP)	mouse	IgE (Igb haplotype)	IGEL b4	TIB-141
Trop-1, human	mouse	IgG2a	162-21.2	HB-241
Trop-2, human	mouse	IgG1 (Igh-4a allotype)	162-46.2	HB-187
Trophoblasts, human	mouse	IgG1 (Igh-4a allotype)	162-46.2	HB-187
Tubulin, beta, nematode	mouse	IgG	P3D	HB-11129†
Tumor, intracellular antigen, human	human/mouse	IgM	Ch13	HB-8573†
Tumor, intracellular antigen, human	human/mouse	IgM	Gr431	HB-8575†
Tumor, intracellular antigen, human	human/mouse	IgM	Te39	HB-8577†
Tumor-associated glycoprotein (TAG-72), human	mouse	IgG1 kappa	CC 49	HB-9459†
Tumors, human	mouse	IgM	B5 NIH	HB-10569†
Tumors, neuroectoderm, human	mouse	IgM	PI 153/3	TIB-198
Uracil DNA glycosylase (UDG), human	mouse	IgM	37.04.12	HB-9312†
Uracil DNA glycosylase (UDG), human	mouse	IgG	40.10.09	HB-9311†
Uracil DNA glycosylase (UDG), human	mouse	IgM	42.08.07	HB-9313†
Uterine carcinoma cell lines, human	mouse	IgM	MH55	HB-8412†
VacA (vacuolating cytotoxin)	mouse	IgG1; kappa	5E4	CRL-2635
VacA (vacuolating cytotoxin)	mouse	IgG1; kappa	5G5	CRL-2633
VacA (vacuolating cytotoxin)	mouse	IgG1; kappa	B3D	CRL-2634
Vascular cell adhesion molecule 1, human and macaque	mouse	IgG1; kappa	VIII-6G10	HB-10519†
Vascular cell adhesion molecule 1, mouse	rat/mouse	IgG1; kappa	M/K-1.9	CRL-1910
Vascular cell adhesion molecule 1, mouse	rat/mouse	IgG1; kappa	M/K-2.7	CRL-1909
Vascular endothelial growth factor (VEGF) receptor-2, mouse	rat/mouse	IgG1; kappa	DC101	HB-11534†
Vasopressin-neurophysin (NP-AVP), rat	mouse	IgG2b; kappa	PS 41	CRL-1799
Vasopressin-neurophysin (NP-AVP), rat	mouse	IgG2b; kappa	PS 45	CRL-1798
VCAM-1, human and macaque	mouse	IgG1; kappa	VIII-6G10	HB-10519†
VCAM-1, mouse	rat/mouse	IgG1; kappa	M/K-1.9	CRL-1910
VCAM-1, mouse	rat/mouse	IgG1; kappa	M/K-2.7	CRL-1909

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Hybridomas by Antigenic Determinant

Antigenic Determinant	Species of Hybridoma	Isotype	Name	ATCC® No.
VEGF receptor 1	mouse	IgG1 (kappa)	6.12	CRL-13006†
Very late antigen 1 (VLA-1) alpha, human	mouse	IgG1	TS2/7.1.1	HB-245
Very late antigen 1 (VLA-1) beta, human	mouse	IgG1	TS2/16.2.1	HB-243
Very late antigen 4 (VLA-4), mouse	rat/mouse	IgG2b	R1-2	HB-227
Very late antigen 4 (VLA-4), sheep	mouse	IgG2b	FW3-218-1	HB-261
Very low density lipoprotein (VLDL) receptor	mouse	IgG1	IgG-6A6	CRL-2197
Vesicular stomatitis virus surface glycoprotein	mouse	IgG1	I1-Hybridoma	CRL-2700
v-fms oncogene peptide (synthetic)	mouse	IgG1 and 2b (kappa)	290-4E10	CRL-2662
Vitamin B6	mouse	IgG1	E6(2)2	HB-8172†
Vitamin D3 receptor, pig	mouse	IgG1	XVI E6E6G10	HB-9496†
Vitonectin receptor (VnR), human	mouse	IgG1	B6H12.2	HB-9771†
Vulva, cancer	human	IgG4	VLN3G2	HB-8636†
Vulva, cancer	human	IgG	VLN6H2	HB-8633†
WC1, bovine	mouse	IgG2a	CC15	HB-265
WC1, bovine	mouse	IgG1	CC39	HB-274
WC1, bovine	mouse	IgG1	IL-A29	CRL-1874
WC3 bovine B cell antigen (BoWC3)	mouse	IgG1	CC21	HB-288
WC4, bovine	mouse	IgG1	CC55	HB-282
WC4, bovine	mouse	IgG1	CC57	HB-268
Yellow fever virus	mouse	IgG2a; kappa	2D12	CRL-1689
Yersinia pestis, F1 antigen	mouse	IgA	F1-3G8-1	HB-192
yes (*c-yes*) oncogene peptide, synthetic	mouse	IgG1	240-13D10	CRL-2672
Zonae pellucidae 1 (ZP1), human	mouse	IgG1 (kappa)	H1.6	CRL-2567
ZP1 glycoprotein, mouse	rat/mouse	IgG2a	M1.4	CRL-2464
ZP2 glycoprotein, human	mouse	IgG1; kappa	H2.8	CRL-2568
ZP2 glycoprotein, mouse	rat/mouse	IgG2a	IE-3	CRL-2463
ZP3 glycoprotein, human	mouse	IgG1; kappa	H3.1	CRL-2569
ZP3 glycoprotein, mouse	rat/mouse	IgG2a	IE-10	CRL-2462

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Tumor Cell Lines by Disease

ATCC has approximately 1,100 tumor cell lines from a variety of species. This list includes tumor cells from primary sites or from sources in which the primary/metastatic status is unknown. They are listed by disease state, which is described with varying degrees of specificity (ATCC reports the description provided by the depositor). Cell lines that are known to be from metastatic sites are given in the following list starting on page 170.

For more information on a cell line, see the main list starting on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Disease	Source	Species	Name	ATCC® No.
Adenocarcinoma	cervix	human	HeLa	CCL-2
Adenocarcinoma	cervix	human	HeLa 229	CCL-2.1
Adenocarcinoma	cervix	human	HeLa S3	CCL-2.2
Adenocarcinoma	cervix	human	H1HeLa	CRL-1958
Adenocarcinoma	cervix	human	Hs 588.T	CRL-7850*
Adenocarcinoma	cervix	human	GH329	CRL-13002†
Adenocarcinoma	cervix	human	GH354	CRL-13003†
Adenocarcinoma	cervix	human	HeLa NR1	CRL-13011†
Adenocarcinoma	colon	human	NCI-H548	CCL-249
Adenocarcinoma	colon	human	Hs 255.T	CRL-7213*
Adenocarcinoma	colon	marmoset	TAC-1	CRL-10632†
Adenocarcinoma	duodenum	human	HuTu 80	HTB-40
Adenocarcinoma	intestine, small	rat	IA-XsSBR	CRL-1677
Adenocarcinoma	kidney	human	A704	CRL-7911*
Adenocarcinoma	kidney	human	A-704	HTB-45
Adenocarcinoma	lung	human	NCI-H1373	CRL-5866
Adenocarcinoma	lung	human	NCI-H1395	CRL-5868
Adenocarcinoma	lung	human	Hs 618.T	CRL-7380*
Adenocarcinoma	lung	human	SK-LU-1	HTB-57
Adenocarcinoma	lung	human	HCC2935	CRL-2869
Adenocarcinoma	lung	human	HCC4006	CRL-2871
Adenocarcinoma	lung	human	HCC827	CRL-2868
Adenocarcinoma	mammary gland	human	Hs 274.T	CRL-7222*
Adenocarcinoma	mammary gland	human	Hs 280.T	CRL-7226*
Adenocarcinoma	mammary gland	human	Hs 281.T	CRL-7227*
Adenocarcinoma	mammary gland	human	Hs 343.T	CRL-7245*
Adenocarcinoma	mammary gland	human	Hs 362.T	CRL-7253*
Adenocarcinoma	mammary gland	human	Hs 739.T	CRL-7477*
Adenocarcinoma	mammary gland	human	Hs 741.T	CRL-7480*
Adenocarcinoma	mammary gland	mouse	JC	CRL-2116
Adenocarcinoma	mammary gland	rat	13762 MAT B III	CRL-1666
Adenocarcinoma	mammary gland	rat	NMU	CRL-1743
Adenocarcinoma	mammary gland	rat	RBA	CRL-1747
Adenocarcinoma	mammary gland	rat	SMT/2A LNM	CRL-6602*
Adenocarcinoma	ovary	human	Caov-3	HTB-75
Adenocarcinoma	pancreas	human	BxPC-3	CRL-1687
Adenocarcinoma	pancreas	human	HPAF-II	CRL-1997

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Adenocarcinoma	pancreas	human	HPAC	CRL-2119
Adenocarcinoma	pancreas	human	Panc 03.27	CRL-2549
Adenocarcinoma	pancreas	human	Panc 08.13	CRL-2551
Adenocarcinoma	pancreas	human	Panc 02.03	CRL-2553
Adenocarcinoma	pancreas	human	Panc 02.13	CRL-2554
Adenocarcinoma	pancreas	human	Panc 04.03	CRL-2555
Adenocarcinoma	pancreas	human	Panc 05.04	CRL-2557
Adenocarcinoma	pancreas	human	Capan-2	HTB-80
Adenocarcinoma	pancreas	mouse	LTPA	CRL-2389
Adenocarcinoma	prostate	mouse, transgenic	TRAMP-C1	CRL-2730
Adenocarcinoma	prostate	mouse, transgenic	TRAMP-C2	CRL-2731
Adenocarcinoma	prostate; transfected	human	CA-HPV-10	CRL-2220
Adenocarcinoma	rectum	human	SW837	CCL-235
Adenocarcinoma	salivary gland, submandibular	mouse	WR21	CRL-2189
Adenocarcinoma	unknown	human	TE 206.T	CRL-7758*
Adenocarcinoma	uterus, endometrium	human	KLE	CRL-1622
Adenocarcinoma	uterus, endometrium	human	HEC-1-A	HTB-112
Adenocarcinoma	uterus, endometrium	human	HEC-1-B	HTB-113
Adenocarcinoma, bronchogenic	lung	human	Hs 229.T	CRL-7194*
Adenocarcinoma, colorectal	cecum	human	NCI-H716	CCL-251
Adenocarcinoma, colorectal	cecum	human	NCI-H747	CCL-252
Adenocarcinoma, colorectal	cecum	human	NCI-H508	CCL-253
Adenocarcinoma, colorectal	cecum	human	NCI-H498	CCL-254
Adenocarcinoma, colorectal	colon	guinea pig	GPC-16	CCL-242
Adenocarcinoma, colorectal	colon	human	WiDr	CCL-218
Adenocarcinoma, colorectal	colon	human	COLO 320DM	CCL-220
Adenocarcinoma, colorectal	colon	human	COLO 320HSR	CCL-220.1
Adenocarcinoma, colorectal	colon	human	DLD-1	CCL-221
Adenocarcinoma, colorectal	colon	human	HCT-15	CCL-225
Adenocarcinoma, colorectal	colon	human	SW480	CCL-228
Adenocarcinoma, colorectal	colon	human	SW403	CCL-230
Adenocarcinoma, colorectal	colon	human	SW48	CCL-231
Adenocarcinoma, colorectal	colon	human	SW1116	CCL-233
Adenocarcinoma, colorectal	colon	human	SW948	CCL-237
Adenocarcinoma, colorectal	colon	human	SW1417	CCL-238
Adenocarcinoma, colorectal	colon	human	LS123	CCL-255
Adenocarcinoma, colorectal	colon	human	LS 180	CL-187
Adenocarcinoma, colorectal	colon	human	LS 174T	CL-188
Adenocarcinoma, colorectal	colon	human	C2BBe1	CRL-2102
Adenocarcinoma, colorectal	colon	human	Hs 257.T	CRL-7214*
Adenocarcinoma, colorectal	colon	human	Hs 587.Int	CRL-7352*
Adenocarcinoma, colorectal	colon	human	Caco-2	HTB-37
Adenocarcinoma, colorectal	colon	human	HT-29	HTB-38
Adenocarcinoma, colorectal	rectum	human	SW1463	CCL-234
Adenocarcinoma, colorectal	rectum	human	Hs 200.T	CRL-7159*
Adenocarcinoma, colorectal	rectum	human	Hs 219.T	CRL-7184*
Adenocarcinoma, ductal; cystic fibrosis	pancreas	human	CFPAC-1	CRL-1918
Adenocarcinoma, ductal	pancreas	human	PL45	CRL-2558
Adenocarcinoma, gastric	stomach	human	AGS	CRL-1739
Adenocarcinoma, ileocecal colorectal	colon	human	HCT-8 (HRT-18)	CCL-244
Adenocarcinoma, large cell, non-small cell lung cancer	lung	human	NCI-H1581	CRL-5878
Adenocarcinoma, malignant, clear cell carcinoma	ovary	human	TOV-21G	CRL-11730†
Adenocarcinoma, malignant, endometrioid carcinoma	ovary	human	TOV-112D	CRL-11731†

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H23	CRL-5800
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H522	CRL-5810
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1435	CRL-5870
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1563	CRL-5875
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1651	CRL-5884
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1734	CRL-5891
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1793	CRL-5896
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1838	CRL-5899
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H1975	CRL-5908
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H2073	CRL-5918
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H2085	CRL-5921
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H2228	CRL-5935
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H2342	CRL-5941
Adenocarcinoma, non-small cell lung cancer	lung	human	NCI-H2347	CRL-5942
Adenocarcinoma, renal	kidney	mouse	RAG	CCL-142
Adenocarcinoma, renal cell	kidney	human	ACHN	CRL-1611
Adenocarcinoma, renal cell	kidney	human	786-O	CRL-1932
Adenocarcinoma, renal cell	kidney	human	769-P	CRL-1933
Adenocarcinoma	pancreas	human	Panc 10.05	CRL-2547
Adenocarcinoma, scirrhous	mammary gland	human	Hs 742.T	CRL-7482*
Adenocarcinoma, squamous cell carcinoma; mixed small cell lung cancer	lung	human	NCI-H2066	CRL-5917
Adenocarcinoma, squamous cell carcinoma; mixed small cell lung cancer	lung	human	NCI-H2286	CRL-5938
Adenocarcinoma, squamous cell, non-small cell lung cancer	lung	human	NCI-H1703	CRL-5889
Adenoma	lung	mouse	LA-4	CCL-196
Adenoma	pancreas, alpha cell	mouse, transgenic	αTC1 Clone 9	CRL-2350
Adenoma	pancreas, beta cell	mouse, transgenic	NIT-2	CRL-2364
Adenoma	pituitary, anterior	rat	RC-4B/C	CRL-1903
Adenomatosis, hereditary	skin	human	182-PF SK	CRL-1532
Adenomatosis, hereditary (Gardner's variant)	skin	human	166-ME SK	CRL-1533
Angiomyolipoma	kidney	human	SV7tert	CRL-2461
Astrocytoma	brain	human	CCF-STTG1	CRL-1718
Astrocytoma	brain	human	SW 1088	HTB-12
Astrocytoma	brain	human	SW 1783	HTB-13
Cancer	breast, nipple	human	HT 762.T	CRL-7789*
Cancer	connective tissue	dog	CF17.T	CRL-6219*
Cancer	connective tissue	dog	CF21.T	CRL-6220*
Cancer	connective tissue	dog	CF24.T	CRL-6221*
Cancer	connective tissue	mouse	MM36T(C)	CRL-6411*
Cancer	connective tissue	mouse	MM37T	CRL-6414*
Cancer	lung	human	Hs 573.T	CRL-7343*
Cancer	mammary gland	dog	CF33.MT	CRL-6227*

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Cancer	mammary gland	dog	CF34.Mg	CRL-6228*
Cancer	mammary gland	dog	CF35.Mg	CRL-6229*
Cancer	mammary gland	dog	CF41.Mg	CRL-6232*
Cancer	mammary gland	dog	CF45B.Mg	CRL-6237*
Cancer	mammary gland	human	Hs 190.T	CRL-7145*
Cancer	mammary gland	human	Hs 319.T	CRL-7236*
Cancer	mammary gland	human	Hs 329.T	CRL-7242*
Cancer	mammary gland	human	Hs 344.T	CRL-7246*
Cancer	mammary gland	human	Hs 350.T	CRL-7248*
Cancer	mammary gland	human	Hs 371.T	CRL-7256*
Cancer	mammary gland	human	Hs 748.T	CRL-7486*
Cancer	mammary gland	human	Hs 841.T	CRL-7574*
Cancer	mammary gland	human	Hs 849.T	CRL-7583*
Cancer	mammary gland	human	Hs 851.T	CRL-7584*
Cancer	mammary gland	human	Hs 861.T	CRL-7596*
Cancer	mammary gland	human	Hs 905.T	CRL-7652*
Cancer	mammary gland	human	Hs 479.T	CRL-7813*
Cancer	mammary gland	monkey, Rhesus	CMMT	CRL-6299*
Cancer	mammary gland	mouse	MM2MT	CRL-6373*
Cancer	mammary gland	mouse	MM2MTC	CRL-6374*
Cancer	mammary gland	mouse	MM2SCT	CRL-6375*
Cancer	mammary gland	mouse	MM5MTC	CRL-6378*
Cancer	mammary gland	mouse	MM5MTM	CRL-6379*
Cancer	mammary gland	mouse	MM5.1	CRL-6380*
Cancer	mammary gland	mouse	MM5/C1	CRL-6444*
Cancer	mammary gland	mouse	RIIIMT	CRL-6449*
Cancer	mammary gland	mouse	+/+ MGT	CRL-6468*
Cancer	mammary gland	mouse	MM5MT	CRL-6590*
Cancer	mammary gland	rat	Rn1T	CRL-6598*
Cancer	mammary gland	rat	Rn2T	CRL-6599*
Cancer	mixed connective and soft tissue	mouse	+/+ SCT	CRL-6469*
Cancer	prostate	rat	R-3327-AT-1	JHU-29
Cancer	prostate	rat	R3327-G	JHU-3
Cancer	prostate	rat	R-3327-AT-2.1	JHU-30
Cancer	prostate	rat	R-3327-AT-3.1	JHU-31
Cancer	prostate	rat	MAT-Lu	JHU-4
Cancer	unknown	mouse	CFZT(A)	CRL-6338*
Cancer	unknown	mouse	CFZT(B)	CRL-6339*
Cancer	unknown	mouse	MM14.OT	CRL-6384*
Cancer	unknown	mouse	MM43T	CRL-6418*
Cancer	unknown	mouse	MM15OT	CRL-6438*
Cancer, colorectal	colon	human	Hs 675.T	CRL-7400*
Cancer, non-small cell lung	lung	human	NCI-H2135	CRL-5926
Cancer, non-small cell lung	lung	human	NCI-H2172	CRL-5930
Cancer, non-small cell lung	lung	human	NCI-H2444	CRL-5945
Carcinoid	lung	human	NCI-H835	CRL-5843
Carcinoid	lung	human	UMC-11	CRL-5975
Carcinoid	lung, bronchus	human	NCI-H727	CRL-5815
Carcinoid, atypical	lung	human	NCI-H720	CRL-5838
Carcinoma	adrenal gland, cortex	human	NCI-H295R	CRL-2128
Carcinoma	bladder, urinary	human	Hs 195.T	CRL-7150*
Carcinoma	bladder, urinary	human	Hs 228.T	CRL-7193*
Carcinoma	bladder, urinary	human	Hs 172.T	CRL-7833*
Carcinoma	bladder, urinary	human	5637	HTB-9
Carcinoma	bladder, urinary	human	HT-1376	CRL-1472
Carcinoma	bladder, urinary	human	HT-1197	CRL-1473
Carcinoma	cervix	human	C-4 I	CRL-1594
Carcinoma	cervix	human	C-4 II	CRL-1595
Carcinoma	cervix	human	DoTc2 4510	CRL-7920*
Carcinoma	cervix	human	C-33 A	HTB-31

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Carcinoma	colon	mouse	CT26.WT	CRL-2638
Carcinoma	colon	mouse	CT26.CL25	CRL-2639
Carcinoma	embryo	mouse	NFPE	CRL-2069
Carcinoma	embryo	mouse	PFHR 9	CRL-2423
Carcinoma	embryo, yolk sac	rat	L2-RYC	CRL-2180
Carcinoma	embryonal stem cell	mouse	ES-E14TG2a	CRL-1821
Carcinoma	embryonal stem cell, germ line competent	mouse	ES-D3 GL	SCRC-1003
Carcinoma	kidney	human	A-498	HTB-44
Carcinoma	lung	human	A549	CCL-185
Carcinoma	lung	human	A-427	HTB-53
Carcinoma	mammary gland	human	Hs 540.T	CRL-7316*
Carcinoma	mammary gland	human	Hs 566(B).T	CRL-7336*
Carcinoma	mammary gland	human	Hs 605.T	CRL-7365*
Carcinoma	mammary gland	human	Hs 606	CRL-7368*
Carcinoma	mammary gland	human	BT-20	HTB-19
Carcinoma	mammary gland	mouse	CMH1a	CRL-8399†
Carcinoma	mammary gland	mouse	CSMαβ6C	CRL-8400†
Carcinoma	mammary gland	mouse	CSMαβ1H	CRL-8401†
Carcinoma	ovary	human	Hs 38.T	CRL-7826*
Carcinoma	ovary	human	Hs 571.T	CRL-7846*
Carcinoma	pancreas	human	MIA PaCa-2	CRL-1420
Carcinoma	pancreas	rat	DSL-6A/C1	CRL-2132
Carcinoma	pancreas	rat	DSL-6B/C2	CRL-2133
Carcinoma	prostate	human	22Rv1	CRL-2505
Carcinoma	salivary gland, submandibular	mouse	SCA-9 clone 15	CRL-1734
Carcinoma	stomach	human	Hs 740.T	CRL-7870*
Carcinoma	thyroid, medulla, C cell	mouse	MTC-M	CRL-1806
Carcinoma	unknown	mouse	Ehrlich-Lettre ascites, strain E	CCL-77
Carcinoma	unknown	rat	LLC-WRC 256	CCL-38
Carcinoma	uterus, endometrium	human	RL95-2	CRL-1671
Carcinoma	yolk sac, parietal endoderm	mouse	PYS-2	CRL-2745
Carcinoma, acinar cell	pancreas	mouse, transgenic	TGP49	CRL-2136
Carcinoma, acinar cell	pancreas	mouse, transgenic	TGP47	CRL-2141
Carcinoma, adenosquamous	lung	human	NCI-H596	HTB-178
Carcinoma, adrenocortical	adrenal gland, cortex	human	NCI-H295	CRL-10296†
Carcinoma, alveolar cell	lung	human	SW 1573	CRL-2170
Carcinoma, basal cell	skin	human	TE 354.T	CRL-7762*
Carcinoma, bronchioalveolar, non-small cell lung cancer	lung, bronchiole, alveolus	human	NCI-H358	CRL-5807
Carcinoma, classic small cell lung cancer	lung	human	NCI-H1688	CCL-257
Carcinoma, classic small cell lung cancer	lung	human	NCI-H1417	CRL-5869
Carcinoma, classic small cell lung cancer	lung	human	NCI-H1672	CRL-5886
Carcinoma, classic small cell lung cancer	lung	human	NCI-H1836	CRL-5898
Carcinoma, clear cell	kidney	human	Caki-2	HTB-47
Carcinoma, clear cell	ovary	human	ES-2	CRL-1978
Carcinoma, colorectal	cecum	human	SNU-C2B	CCL-250
Carcinoma, colorectal	cecum	human	SNU-C2A	CCL-250.1
Carcinoma, colorectal	cecum	human	LS513	CRL-2134
Carcinoma, colorectal	cecum	human	LS1034	CRL-2158
Carcinoma, colorectal	cecum	human	LS411N	CRL-2159
Carcinoma, colorectal	colon	human	HCT 116	CCL-247
Carcinoma, colorectal	colon	human	ATRFLOX	CRL-2780
Carcinoma, colorectal	rectum	human	Hs 722.T	CRL-7456*
Carcinoma, ductal	mammary gland	human	UACC-812	CRL-1897

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Carcinoma, ductal	mammary gland	human	HCC1954	CRL-2338
Carcinoma, ductal	mammary gland	human	Hs 574.T	CRL-7345*
Carcinoma, ductal	mammary gland	human	BT-483	HTB-121
Carcinoma, ductal	mammary gland	human	BT-549	HTB-122
Carcinoma, ductal	mammary gland	human	DU4475	HTB-123
Carcinoma, ductal	mammary gland	human	Hs 578T	HTB-126
Carcinoma, ductal	mammary gland	human	BT-474	HTB-20
Carcinoma, embryonal	testis	human	Cates-1B	HTB-104
Carcinoma, embryonal, testicular teratoma	testis	mouse	F9	CRL-1720
Carcinoma, epidermoid	epidermis	human	A-431	CRL-1555
Carcinoma, epidermoid	epidermis	human	A431NS	CRL-2592
Carcinoma, epidermoid	epidermis	human	A253	CRL-7902*
Carcinoma, epidermoid	lung	human	HLF-a	CCL-199
Carcinoma, epidermoid	salivary gland, submaxillary	human	A-253	HTB-41
Carcinoma, epithelioid	pancreas, duct	human	PANC-1	CRL-1469
Carcinoma, gastric	stomach	human	SNU-1	CRL-5971
Carcinoma, hepatocellular	liver	chicken	LMH	CRL-2117
Carcinoma, hepatocellular	liver	chicken	LMH/2A	CRL-2118
Carcinoma, hepatocellular	liver	human	C3A	CRL-10741†
Carcinoma, hepatocellular	liver	human	SNU-398	CRL-2233
Carcinoma, hepatocellular	liver	human	SNU-449	CRL-2234
Carcinoma, hepatocellular	liver	human	SNU-182	CRL-2235
Carcinoma, hepatocellular	liver	human	SNU-475	CRL-2236
Carcinoma, hepatocellular	liver	human	Hep 3B2.1-7	HB-8064
Carcinoma, hepatocellular	liver	human	Hep G2	HB-8065
Carcinoma, hepatocellular	liver	topminnow	PLHC-1	CRL-2406
Carcinoma, large cell, neuroendocrine, non-small cell lung cancer	lung	human	NCI-H810	CRL-5816
Carcinoma, Lewis lung	lung	mouse	LL/2 (LLC1)	CRL-1642
Carcinoma, malignant	prostate	rat	AT3B-1	CRL-2375
Carcinoma, malignant	prostate	rat	MAT-Ly-Lu-B-2	CRL-2376
Carcinoma, mammary	breast	mouse	EMT6	CRL-2755
Carcinoma, medulla	thyroid	human	TT	CRL-1803
Carcinoma, medullary thyroid	thyroid	rat	6-23 (Clone 6)	CRL-1607
Carcinoma, mucoepidermoid pulmonary	lung	human	NCI-H292	CRL-1848
Carcinoma, non-small cell lung cancer	lung	human	NCI-H2126	CCL-256
Carcinoma, papilloma virus induced	unknown	rabbit	VX7	CRL-6504*
Carcinoma, pleomorphic hepatocellular	liver	human	SNU-387	CRL-2237
Carcinoma, pleomorphic hepatocellular	liver	human	SNU-423	CRL-2238
Carcinoma, polyploid	rectum	mouse	CMT-93	CCL-223
Carcinoma, primary acantholytic squamous cell	mammary gland	human	HCC1806	CRL-2335
Carcinoma, primary ductal	mammary gland	human	UACC-893	CRL-1902
Carcinoma, primary ductal	mammary gland	human	HCC38	CRL-2314
Carcinoma, primary ductal	mammary gland	human	HCC70	CRL-2315
Carcinoma, primary ductal	mammary gland	human	HCC202	CRL-2316
Carcinoma, primary ductal	mammary gland	human	HCC1143	CRL-2321
Carcinoma, primary ductal	mammary gland	human	HCC1187	CRL-2322
Carcinoma, primary ductal	mammary gland	human	HCC1395	CRL-2324
Carcinoma, primary ductal	mammary gland	human	HCC1419	CRL-2326
Carcinoma, primary ductal	mammary gland	human	HCC1500	CRL-2329
Carcinoma, primary ductal	mammary gland	human	HCC1599	CRL-2331
Carcinoma, primary ductal	mammary gland	human	HCC1937	CRL-2336
Carcinoma, primary ductal	mammary gland	human	HCC2157	CRL-2340

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Carcinoma, primary ductal	mammary gland	human	HCC2218	CRL-2343
Carcinoma, primary metaplastic	mammary gland	human	HCC1569	CRL-2330
Carcinoma, primary small cell	adrenal gland, cortex	human	SW-13	CCL-105
Carcinoma, probably lung anaplastic	unknown	human	Calu-6	HTB-56
Carcinoma, small cell lung cancer	lung	human	DMS 79	CRL-2049
Carcinoma, small cell lung cancer	lung	human	DMS 53	CRL-2062
Carcinoma, small cell lung cancer	lung	human	DMS 114	CRL-2066
Carcinoma, small cell lung cancer	lung	human	SW 1271	CRL-2177
Carcinoma, small cell lung cancer	lung	human	NCI-H2227	CRL-5934
Carcinoma, small cell lung cancer	lung	human	NCI-H1963	CRL-5982
Carcinoma, small cell lung cancer, large cell, variant	lung	human	SHP-77	CRL-2195
Carcinoma, small cell lung cancer, multidrug resistant	lung	human	H69AR	CRL-11351†
Carcinoma, squamous cell	cervix	human	SW756	CRL-10302†
Carcinoma, squamous cell	cervix	human	SiHa	HTB-35
Carcinoma, squamous cell	lung	human	NCI-H2170	CRL-5928
Carcinoma, squamous cell	lung	human	NCI-H520	HTB-182
Carcinoma, squamous cell	lung	human	SW 900	HTB-59
Carcinoma, squamous cell	lung	mouse	KLN 205	CRL-1453
Carcinoma, squamous cell	nasal	rat	FAT 7	CRL-2109
Carcinoma, squamous cell	pharynx	human	FaDu	HTB-43
Carcinoma, squamous cell	thyroid	human	SW579	HTB-107
Carcinoma, squamous cell	tongue	human	SCC-15	CRL-1623
Carcinoma, squamous cell	tongue	human	SCC-4	CRL-1624
Carcinoma, squamous cell	tongue	human	SCC-25	CRL-1628
Carcinoma, squamous cell	tongue	human	SCC-9	CRL-1629
Carcinoma, squamous cell	tongue	human	CAL 27	CRL-2095
Carcinoma, squamous cell	vulva	human	SW 954	HTB-117
Carcinoma, transitional cell	bladder, urinary	human	UM-UC-3	CRL-1749
Carcinoma, transitional cell	bladder, urinary	human	SW 780	CRL-2169
Carcinoma, transitional cell	bladder, urinary	human	J82	HTB-1
Carcinoma, transitional cell	bladder, urinary	human	SCaBER	HTB-3
Carcinoma, transitional cell	bladder, urinary	human	T24	HTB-4
Carcinoma, transitional cell	bladder, urinary	human	TCCSUP	HTB-5
Carcinoma, transitional cell	ureter	human	Hs 789.T	CRL-7886*
Carcinoma, transitional cell	urethra	human	Hs 769.T	CRL-7882*
Chondrosarcoma	bone	human	Hs 819.T	CRL-7891*
Chondrosarcoma	bone	human	SW 1353	HTB-94
Choriocarcinoma	placenta	human	BeWo	CCL-98
Choriocarcinoma	placenta	human	JAR	HTB-144
Choriocarcinoma	placenta	human	JEG-3	HTB-36
Dermatofibrosarcoma	skin	human	Hs 357.T	CRL-7252*
Dermatofibrosarcoma	skin	human	Hs 941.T	CRL-7692*
Dermatofibrosarcoma protuberans	skin	human	Hs 295.T	CRL-7233*
Dermatofibrosarcoma protuberans	skin	human	Hs 63.T	CRL-7043*
Endothelioma	brain, cerebral cortex; transformed	mouse	bEnd.3	CRL-2299
Erythroleukemia	bone marrow	cat	F25	CRL-6566*
Erythroleukemia	bone marrow, erythroblast	human	TF-1	CRL-2003
Erythroleukemia	bone marrow, erythroblast	human	TF-1a	CRL-2451
Erythroleukemia	bone marrow, erythroblast	human	TF-1.CN5a.1	CRL-2512
Erythroleukemia	bone marrow, erythroblast	human	HEL 92.1.7	TIB-180
Fibroma	connective tissue	gerbil, Mongolian	IMR-33	CCL-146
Fibromatosis	mixed connective and soft tissue	human	TE 115.T	CRL-7744*
Fibrosarcoma	bladder (adjacent)	mouse	MM45T.BI	CRL-6420*

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Fibrosarcoma	connective tissue	cat	FC77.T	CRL-6105*
Fibrosarcoma	connective tissue	cat	FC81.T	CRL-6108*
Fibrosarcoma	connective tissue	cat	FC94.T	CRL-6113*
Fibrosarcoma	connective tissue	human	HT-1080	CCL-121
Fibrosarcoma	connective tissue	human	Hs 778(A).T	CRL-7508*
Fibrosarcoma	connective tissue	human	Hs 778(B).T	CRL-7509*
Fibrosarcoma	connective tissue	human	Hs 15.T	CRL-7824*
Fibrosarcoma	connective tissue	human	SW 684	HTB-91
Fibrosarcoma	connective tissue	mouse	$HSDM_1C_1$	CCL-148
Fibrosarcoma	connective tissue	mouse	MM47T	CRL-6424*
Fibrosarcoma	liver (adjacent)	mouse	MM45T.Li	CRL-6421*
Fibrosarcoma	mixed connective and soft tissue	human	Hs 93.T	CRL-7062*
Fibrosarcoma	spleen	cat	FC81.Sp	CRL-6107*
Fibrosarcoma	spleen	cat	FC83.Sp	CRL-6110*
Fibrosarcoma	spleen	mouse	MM45T.Sp	CRL-6422*
Fibrosarcoma	spleen	mouse	MM52.Sp	CRL-6428*
Fibrosarcoma	spleen	mouse	MM53.Sp	CRL-6430*
Fibrosarcoma	thymus	cat	FC81.Thy	CRL-6109*
Fibrosarcoma	unknown	human	Hs 868.T	CRL-7604*
Fibrosarcoma	unknown	mouse	WEHI-13VAR	CRL-2148
Fibrosarcoma	unknown	mouse	MM46T	CRL-6423*
Fibrosarcoma	unknown	mouse	MM48T	CRL-6425*
Fibrosarcoma	unknown	mouse	MM49T	CRL-6426*
Fibrosarcoma	unknown	mouse	MM52.T	CRL-6429*
Fibrosarcoma	unknown	mouse	Sal/N	CRL-2544
Fibrosarcoma	unknown	mouse	TM-7	CRL-2798
Fibrosarcoma	unknown	mouse	MC17-51	CRL-2799
Fibrosarcoma	unknown	mouse	MN-11	CRL-2800
Fibrosarcoma	unknown	mouse	TM-34	CRL-2801
Fibrosarcoma	unknown	mouse	MiF-6	CRL-2802
Fibrosarcoma	unknown	mouse	TM-28	CRL-2803
Fibrosarcoma	unknown	mouse	M-7	CRL-2804
Fibrosarcoma	unknown	mouse	MT-6	CRL-2805
Fibrosarcoma	unknown	quail, Japanese	QT6	CRL-1708
Fibrosarcoma, chemically induced	muscle	quail, Japanese	QM7	CRL-1962
Fibrosarcoma, malignant, dibenzanthracene induced	ascites	mouse	Sal	CRL-2543
Fibrosarcoma, methylcholanthracene induced	unknown	mouse	WEHI 164	CRL-1751
Fibrosarcoma, methylcholanthrocene induced	unknown	mouse	MC57G	CRL-2295
Glioblastoma	brain	human	A172	CRL-1620
Glioblastoma	brain	human	U-138 MG	HTB-16
Glioblastoma	brain, glial cell	human	DBTRG-05MG	CRL-2020
Glioblastoma	brain	human	LN-18	CRL-2610
Glioblastoma	brain	human	LN-229	CRL-2611
Glioblastoma, astrocytoma	brain	human	U-87 MG	HTB-14
Glioblastoma, astrocytoma	brain	human	U-118 MG	HTB-15
Glioblastoma, malignant	brain, glial cell	human	M059K	CRL-2365
Glioblastoma, malignant	brain, glial cell	human	M059J	CRL-2366
Glioblastoma, multiforme	brain	human	T98G	CRL-1690
Glioblastoma, neuroblastoma	brain, glial cell, neuron	mouse/rat hybrid	NG108-15	HB-12317†
Glioblastoma, p53 expression	brain	human	LNZTA3WT4	CRL-11543†
Glioblastoma, p53 expression	brain	human	LNZTA3WT11	CRL-11544†
Glioma	brain	human	Hs 683	HTB-138
Glioma	brain	rat	C_6	CCL-107
Glioma, undifferentiated malignant	brain, fetal	rat	F98	CRL-2397
Glioma, undifferentiated malignant	brain, fetal	rat	RG2	CRL-2433
Gliosarcoma, expresses beta galactosidase	brain	rat	C6/LacZ	CRL-2199

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Gliosarcoma, expresses beta galactosidase	brain	rat	9L/lacZ	CRL-2200
Gliosarcoma, expresses beta galactosidase	brain	rat	C6/lacZ7	CRL-2303
Glomangioma	kidney, glomus	human	glomotel	CRL-2597
Granuloma, eosinophilic	bone	human	Hs 454.T	CRL-7802*
Granuloma, noncaseating	lymph node	human	Hs 697.Ln	CRL-7434*
Granuloma, periostitis	bone	human	Hs 709.T	CRL-7453*
Hemangioendothelioma	unknown	mouse	EOMA	CRL-2586
Hemangioendothelioma; expresses GFP	unknown	mouse	EOMA-GFP	CRL-2587
Hepatoma	liver	mouse	Hepa 1-6	CRL-1830
Hepatoma	liver	mouse	Hepa-1c1c7	CRL-2026
Hepatoma	liver	mouse	BpRcl	CRL-2217
Hepatoma	liver	mouse	tao BpRcl	CRL-2218
Hepatoma	liver	rat	MH_1C_1	CCL-144
Hepatoma	liver	rat	H-4-II-E	CRL-1548
Hepatoma	liver	rat	H4TG	CRL-1578
Hepatoma	liver	rat	H4-II-E-C3	CRL-1600
Hepatoma	liver	trout, rainbow	RTH-149	CRL-1710
Hepatoma	liver	woodchuck, Eastern	WCH-17	CRL-2082
Hepatoma	liver, Alexander cells	human	PLC/PRF/5	CRL-8024†
Hepatoma; deficient in aryl hydrocarbon hydoxylase activity	liver	mouse	c37 (B7IFi1)	CRL-2711
Hepatoma; deficient in aryl hydrocarbon hydoxylase activity	liver	mouse	c1 (B6NLxv1c2)	CRL-2716
Hepatoma; lacks functional aryl hydrocarbon receptor nuclear translocator protein	liver	mouse	c4 (B13NBii1)	CRL-2717
Hepatoma, Morris Hepatoma 7777	liver	rat	McA-RH7777	CRL-1601
Hepatoma, Morris Hepatoma 8994	liver	rat	McA-RH8994	CRL-1602
Hepatoma, Novikoff Hepatoma	liver	rat	N1-S1 Fudr	CRL-1603
Hepatoma, Novikoff Hepatoma	liver	rat	N1-S1	CRL-1604
Hepatoma; reduced levels of aryl AHR mRNA and protein	liver	mouse	c12 (B15ECiii2)	CRL-2710
Hepatoma; reduced levels of aryl hydrocarbon hydroxylase	liver	mouse	vT{2}	CRL-2712
Hepatoma; reduced levels of aryl hydrocarbon hydroxylase	liver	mouse	c35 (B16GBi1c3)	CRL-2715
Histiocytoma	connective tissue	human	Hs 856.T	CRL-7593*
Histiocytoma, fibrous, malignant	unknown	mouse	p53NiS1	CRL-2619
Histiocytosis, chronically infected with *Ehrlichia canis*	macrophage	dog	DH82ECOK	CRL-10390†
Histiocytosis, malignant	macrophage	dog	DH82	CRL-10389†
Hodgkin's disease	lymphoblast, peripheral blood	human	RPMI 6666	CCL-113
Hypernephroma	kidney	human	SW 156	CRL-2175
Insulinoma	pancreas, beta cell	mouse, transgenic	β-TC-6	CRL-11506†
Insulinoma	pancreas, islet of Langerhans	mouse, transgenic	NIT-1	CRL-2055
Insulinoma; produces insulin and and L-dopa decarboxylase but not somatostatin	pancreas, islet of Langerhans	rat	RIN-m5F	CRL-11605†
Insulinoma; produces insulin and L-dopa-decarboxylase but not somatostatin	pancreas, islet of Langerhans	rat	RIN-5F	CRL-2058
Insulinoma; produces insulin and somatostatin	pancreas, islet of Langerhans	rat	RIN-m	CRL-2057
Insulinoma; produce somatostatin and L-dopa-decarboxylase but not insulin	pancreas, islet of Langerhan	rat	RIN-14B	CRL-2059

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Interscapular tumor	possibly basal cell	bat, mouse-eared	Mvi/It	CRL-6012*
Keratoacanthoma	skin	human	Hs 892.T	CRL-7630*
Keratoacanthoma, malignant acanthocytosis	skin	human	Hs 898.T	CRL-7641*
Leiomyoblastoma, renal	kidney	human	G-402	CRL-1440
Leiomyosarcoma	muscle	human	TE 149.T	CRL-7751*
Leiomyosarcoma	connective tissue	human	Hs 5.T	CRL-7822*
Leiomyosarcoma	smooth muscle, ductus deferens	hamster, Syrian golden	DDT$_1$ MF-2	CRL-1701
Leiomyosarcoma	uterus	human	SK-UT-1	HTB-114
Leiomyosarcoma	uterus, endometrium	human	SK-UT-1B	HTB-115
Leiomyosarcoma	vulva	human	SK-LMS-1	HTB-88
Leukemia	B lymphocyte	mouse	CW13.20-3B3 (clone of BCL 1)	CRL-1669
Leukemia	basophil, peripheral blood	rat	RBL-1	CRL-1378
Leukemia	basophil, peripheral blood	rat	RBL-2H3	CRL-2256
Leukemia	erythroblast, spleen	mouse	BB88	TIB-55
Leukemia	erythroblast, spleen	mouse	D1B	TIB-56
Leukemia	lymph node	bovine	2FLB.Ln	CRL-6045*
Leukemia	myelomonocyte, macrophage-like	mouse	WEHI-3	TIB-68
Leukemia	spleen	mouse	T27A	TIB-57
Leukemia	spleen	mouse	D2N	TIB-58
Leukemia	spleen	mouse	BC16A	TIB-59
Leukemia	spleen	mouse	BC3A	TIB-60
Leukemia, acute lymphoblastic	B lymphoblast	human	SUP-B15	CRL-1929
Leukemia, acute lymphoblastic	B lymphoblast, peripheral blood	human	CCRF-SB	CCL-120
Leukemia, acute lymphoblastic	B lymphoblast, peripheral blood	human	8E5	CRL-8993†
Leukemia, acute lymphoblastic	bone marrow, myeloblast	human	KG-1	CCL-246
Leukemia, acute lymphoblastic	bone marrow, myeloblast	human	KG-1	CRL-8031†
Leukemia, acute lymphoblastic	bone marrow, promyeloblast	human	KG-1a	CCL-246.1
Leukemia, acute lymphoblastic	T lymphoblast	human	TALL-104	CRL-11386†
Leukemia, acute lymphoblastic	T lymphoblast	human	MOLT-4	CRL-1582
Leukemia, acute lymphoblastic	T lymphoblast, peripheral blood	human	CCRF-CEM	CCL-119
Leukemia, acute lymphoblastic	T lymphoblast, peripheral blood	human	CCRF-HSB-2	CCL-120.1
Leukemia, acute lymphoblastic	T lymphoblast, peripheral blood	human	MOLT-3	CRL-1552
Leukemia, acute lymphoblastic	T lymphoblast, peripheral blood	human	CEM/C2	CRL-2264
Leukemia, acute lymphoblastic	T lymphoblast, peripheral blood	human	CEM/C1	CRL-2265
Leukemia, acute lymphoblastic t(16;20) translocation	T lymphocyte, peripheral blood	human	Loucy	CRL-2629
Leukemia, acute lymphoblastic, t(4;11) translocation	bone marrow	human	RS4;11	CRL-1873
Leukemia, acute lymphocytic (non-T, non-B)	unknown	human	Reh	CRL-8286†
Leukemia, acute monocytic	monocyte	human	THP-1	TIB-202
Leukemia, acute monocytic	monocyte, peripheral blood	human	AML-193	CRL-9589†
Leukemia, acute myeloblastic	peripheral blood	human	Kasumi-1	CRL-2724
Leukemia, acute myeloblastic	peripheral blood	human	Kasumi-3	CRL-2725
Leukemia, acute myelogenous	peripheral blood, B lymphoblast	human	BDCM	CRL-2740

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Leukemia, acute myeloid	unknown	mouse	C1498	TIB-49
Leukemia, acute myeloid	peripheral blood	human	AML14.3D10/CCCKR3 Clone 16	CRL-12079†
Leukemia, acute myeloid, subtype M2	peripheral blood	human	Kasumi-6	CRL-2775
Leukemia, acute promyelocytic	promyeloblast, peripheral blood	human	HL-60	CCL-240
Leukemia, acute promyelocytic	promyeloblast, peripheral blood	human	Clone 15 HL-60	CRL-1964
Leukemia, acute promyelocytic	promyeloblast, peripheral blood	human	HL-60/MX2	CRL-2257
Leukemia, acute promyelocytic	promyeloblast, peripheral blood	human	HL-60/MX1	CRL-2258
Leukemia, acute T cell	T lymphocyte	human	J.CaM1.6	CRL-2063
Leukemia, acute T cell	T lymphocyte	human	Jurkat, Clone E6-1	TIB-152
Leukemia, acute T cell	T lymphocyte	human	J.RT3-T3.5	TIB-153
Leukemia, acute T cell, CD4 negative	T lymphoblast	human	D1.1	CRL-10915†
Leukemia, acute T cell, CD45 deficient	T lymphocyte	human	J45.01	CRL-1990
Leukemia, biphenotypic B myelomonocytic	peripheral blood	human	MV-4-11	CRL-9591†
Leukemia, chronic myeloblastic	peripheral blood	human	Kasumi-4	CRL-2726
Leukemia, chronic myelogenous	basophil, peripheral blood	human	KU812	CRL-2099
Leukemia, chronic myelogenous	basophil, peripheral blood	human	KU812E	CRL-2100
Leukemia, chronic myelogenous	basophil, peripheral blood	human	KU812F	CRL-2101
Leukemia, chronic myelogenous	bone marrow, megakaryoblast	human	MEG-01	CRL-2021
Leukemia, hairy cell	B lymphoblast, peripheral blood	human	Mo-B	CCL-245
Leukemia, hairy cell	T lymphocyte	human	Mo	CRL-8066†
Leukemia, lymphoblastic	T lymphoblast	human	SUP-T1	CRL-1942
Leukemia, lymphocytic	unknown	mouse	L1210	CCL-219
Leukemia, lymphoma	B lymphocyte	mouse	BCL_1 clone $5B_1b$	TIB-197
Leukemia, lymphoma	pre-B lymphoblast	human	JM1	CRL-10423†
Leukemia, myeloid	myeloblast	mouse	M1	TIB-192
Leukemia, myeloid, virus induced	peripheral blood	mouse	M-NFS-60	CRL-1838
Leukemia, myelomonoblastic	monoblast, peripheral blood	human	GDM-1	CRL-2627
Leukemia, myelomonocytic	lymphoblast	human	CESS	TIB-190
Leukemia, plasma cell	B lymphoblast, peripheral blood	human	ARH-77	CRL-1621
Liposarcoma	connective tissue	human	SW 872	HTB-92
Lymphogranulomatosis	lymph node	human	Hs 268.T	CRL-7218*
Lymphoma	B lymphoblast	human	1A2	CRL-8119†
Lymphoma	B lymphocyte	monkey, Rhesus	LCL 8664	CRL-1805†
Lymphoma	B lymphocyte	mouse	WEHI-231	CRL-1702
Lymphoma	B lymphocyte	mouse	WEHI-279	CRL-1704
Lymphoma	B lymphocyte	mouse	2PK-3	TIB-203
Lymphoma	B lymphocyte	mouse	CH1	TIB-221
Lymphoma	B lymphocyte, spleen	mouse	RAW 8.1	TIB-50
Lymphoma	bursa	chicken	DT40	CRL-2111
Lymphoma	bursa	chicken	DT95	CRL-2112
Lymphoma	lymph node	human	Hs 313.T	CRL-7235*
Lymphoma	lymph node	human	Hs 777.T	CRL-7507*
Lymphoma	lymph node, cervical	human	Hs 602	HTB-142
Lymphoma	lymph node, submandibular	cat	F_1B	CRL-6168*
Lymphoma	lymphoblast	cat	FL74-UCD-1	CRL-8012†
Lymphoma	monocyte/macrophage	mouse	$P388D_1$	CCL-46
Lymphoma	monocyte/macrophage	mouse	NCTC 3749	CCL-46.1

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Lymphoma	monocyte/macrophage	mouse	PU5-1.8 (PU5-1R)	TIB-61
Lymphoma	monocyte/macrophage	mouse	P388D$_1$ (IL-1)	TIB-63
Lymphoma	pre-B lymphoblast	mouse	NFS-5 C-1	CRL-1693
Lymphoma	pre-B lymphoblast	mouse	NFS-25 C-3	CRL-1695
Lymphoma	pro-B lymphoblast	mouse	NFS-70 C-10	CRL-1694
Lymphoma	spleen	cat	FC16.Sp	CRL-6174*
Lymphoma	spleen	mouse	LBRM-33-1A5	CRL-8079†
Lymphoma	spleen	mouse	RAW 309F.1.1	TIB-51
Lymphoma	T lymphocyte	human	H9/HTLV-IIIB	CRL-8543†
Lymphoma	T lymphocyte	mouse	E.G7-OVA	CRL-2113
Lymphoma	T lymphocyte	mouse	TK-1	CRL-2396
Lymphoma	T lymphocyte	mouse	S1A(Thy-1$^-$b)	TIB-231
Lymphoma	T lymphocyte	mouse	BW5147(T200$^-$a)5.2	TIB-233
Lymphoma	T lymphocyte	mouse	S1A.TB.4.8.2	TIB-27
Lymphoma	T lymphocyte	mouse	S49.1	TIB-28
Lymphoma	T lymphocyte	mouse	S49.1H.1AG.6/2	TIB-29
Lymphoma	T lymphocyte	mouse	S49.1TB.2	TIB-30
Lymphoma	T lymphocyte	mouse	S49.1TB.4 DEX R.63	TIB-33
Lymphoma	T lymphocyte	mouse	S49.1G.3	TIB-34
Lymphoma	T lymphocyte	mouse	S49.1G.3 PHA.100/0	TIB-35
Lymphoma	T lymphocyte	mouse	S49 (Thy-1-a)	TIB-36
Lymphoma	T lymphocyte	mouse	TIMI.4G.1.3	TIB-38
Lymphoma	T lymphocyte	mouse	EL4	TIB-39
Lymphoma	T lymphocyte	mouse	EL4.BU.1.OUA^r.1.1	TIB-41
Lymphoma	T lymphocyte, B lymphocyte, thymus	mouse	WEHI 22.1	TIB-54
Lymphoma	T lymphocyte, cutaneous	human	HuT 78	TIB-161
Lymphoma	T lymphocyte, thymus	mouse	BW5147.3(Thy-1$^-$e).10	TIB-234
Lymphoma	T lymphocyte, thymus	mouse	R1.1	TIB-42
Lymphoma	T lymphocyte, thymus	mouse	R1E/TL8x.1	TIB-43
Lymphoma	T lymphocyte, thymus	mouse	R1.G1	TIB-44
Lymphoma	T lymphocyte, thymus	mouse	R1E/TL8x.1.G1.OUA^r.1	TIB-45
Lymphoma	T lymphocyte, thymus	mouse	BW5147.3	TIB-47
Lymphoma	T lymphocyte, thymus	mouse	WEHI 7.1	TIB-53
Lymphoma	thymus	mouse	L5178-R (LY-R)	CRL-1722
Lymphoma	thymus	mouse	L5178-S (LY-S)	CRL-1723
Lymphoma	thymus	mouse	EL4.IL-2	TIB-181
Lymphoma	thymus	mouse	TIMI.4	TIB-37
Lymphoma	unknown	cat	FeLV-3281	CRL-9116†
Lymphoma	unknown	human	HT 1417	CRL-7797*
Lymphoma	unknown	mouse	L5178Y TK+/- (clone 3.7.2C)	CRL-9518†
Lymphoma	unknown	mouse	WR19L	TIB-52
Lymphoma, AMLV-transformed	pre-B lymphoblast	mouse	ABE-8.1/2	TIB-205
Lymphoma, B cell	peritoneal effusion (metastatic site: peritoneal cavity)	human	JSC-1	CRL-2769
Lymphoma, body cavity based	B lymphoblast, peripheral blood	human	BCP-1	CRL-2294
Lymphoma, Burkitt's	ascites, B lymphocyte	human	2B8	CRL-12569†
Lymphoma, Burkitt's	B lymphoblast,	human	Daudi	CCL-213
Lymphoma, Burkitt's	B lymphoblast, peripheral blood	human	NC-37	CCL-214
Lymphoma, Burkitt's	B lymphocyte	human	EB-3	CCL-85
Lymphoma, Burkitt's	B lymphocyte	human	Raji	CCL-86
Lymphoma, Burkitt's	B lymphocyte	human	Jiyoye	CCL-87
Lymphoma, Burkitt's	B lymphocyte	human	NAMALWA	CRL-1432
Lymphoma, Burkitt's	B lymphocyte	human	HS-Sultan	CRL-1484
Lymphoma, Burkitt's	B lymphocyte	human	CA46	CRL-1648
Lymphoma, Burkitt's	B lymphocyte	human	GA-10	CRL-2392
Lymphoma, Burkitt's	B lymphocyte	human	GA-10 (Clone 4)	CRL-2393
Lymphoma, Burkitt's	B lymphocyte	human	GA-10 (Clone 20)	CRL-2394

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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Lymphoma, Burkitt's	kidney, B cell	human	20B8	CRL-12582†
Lymphoma, Burkitt's	kidney, B cell	human	HKB-11	CRL-12568†
Lymphoma, Burkitt's	kidney, peripheral blood, somatic cell hybrid	human	1G2	CRL-13005†
Lymphoma, Burkitt's	lymph node	human	2F7	CRL-10237†
Lymphoma, Burkitt's	upper maxilla	human	EB1	HTB-60
Lymphoma, Burkitt's (American)	B lymphocyte	human	Ramos (RA 1)	CRL-1596
Lymphoma, Burkitt's (American)	B lymphocyte	human	Ramos.2G6.4C10	CRL-1923
Lymphoma, cutaneous	T lymphocyte, peripheral blood	human	H9	HTB-176
Lymphoma, cutaneous T cell	T lymphocyte, peripheral blood	human	HH	CRL-2105
Lymphoma, cutaneous T cell, mycosis fungoides	T lymphocyte, peripheral blood	human	MJ	CRL-8294†
Lymphoma, diffuse large cell, non-Hodgkin's B cell	B lymphocyte, peripheral blood	human	Toledo	CRL-2631
Lymphoma, EBV and KSHV positive	B lymphoblast	human	BC-1	CRL-2230
Lymphoma, EBV and KSHV positive	B lymphoblast	human	BC-2	CRL-2231
Lymphoma, histiocytic	macrophage	human	U-937	CRL-1593.2
Lymphoma, histiocytic; neomycin resistant	macrophage	human	TUR	CRL-2367
Lymphoma, Hodgkin's disease	lymph node	human	Hs 604.T	CRL-7362*
Lymphoma, Hodgkin's disease	lymph node	human	Hs 751.T	CRL-7488*
Lymphoma, Hodgkin's disease	lymph node	human	Hs 445	HTB-146
Lymphoma, Hodgkin's disease	lymph node, spleen	human	Hs 611.T	CRL-7373*
Lymphoma, Hodgkin's disease	lymph node, thymus	human	Hs 616.T	CRL-7378*
Lymphoma, KSHV positive	B lymphoblast	human	BC-3	CRL-2277
Lymphoma, large cell	B lymphoblast	human	DB	CRL-2289
Lymphoma, lymphocytic	lymph node	human	Hs 505.T	CRL-7306*
Lymphoma, lymphocytic	lymph node	human	Hs 491.T	CRL-7818*
Lymphoma, lymphocytic	spleen	human	Hs 518.T	CRL-7313*
Lymphoma, methylnitrosourea induced	pre-B lymphoblast	mouse	70Z/3	TIB-158
Lymphoma, Mo-MuLV induced	unknown	mouse	YAC-1	TIB-160
Lymphoma, mycosis fungoides	T lymphocyte, cutaneous	human	HuT 102	TIB-162
Lymphoma, possible Burkitt's	lymph node	human	TE 161.T	CRL-7753*
Lymphoma, radiation induced	T lymphocyte	mouse	LBRM TG6	CRL-1778
Lymphoma, radiation induced	T lymphocyte	mouse	LBRM-33 clone 4A2	TIB-155
Lymphosarcoma	B lymphocyte	bovine	BL3.1	CRL-2306
Lymphosarcoma	bone marrow	bovine	LB9.Bm	CRL-6053*
Lymphosarcoma	bone marrow	bovine	LB10.Bm	CRL-6060*
Lymphosarcoma	lymph node	human	TE 175.T	CRL-7755*
Lymphosarcoma	mixed spleen, thymus, and bone marrow	bovine	LB9.Sp/Thy/Bm	CRL-6052*
Lymphosarcoma	spleen	bovine	LB9.Sp	CRL-6058*
Lymphosarcoma	spleen	bovine	LB10.Sp	CRL-6063*
Lymphosarcoma	spleen	bovine	LB11.Sp	CRL-6067*
Lymphosarcoma	thymus	bovine	LB9.Thy	CRL-6059*
Lymphosarcoma	thymus	bovine	LB10.Thy	CRL-6064*
Lymphosarcoma	thymus	bovine	LB11.Thy	CRL-6068*
Lymphosarcoma	unknown	mouse	MB III (de Bruyn-Gey)	CCL-32
Lymphosarcoma, leukemia	B lymphocyte	bovine	BL-3	CRL-8037†
Mastocytoma	mast cell	mouse	P815	TIB-64
Medulloblastoma	brain, cerebellum	human	D341 Med	HTB-187
Medulloblastoma, desmoplastic cerebellar	brain, cerebellum	human	Daoy	HTB-186
Melanoma	skin	human	WM-115	CRL-1675
Melanoma	skin	human	Hs 600.T	CRL-7360*
Melanoma	skin	human	Hs 688(A).T	CRL-7425*
Melanoma	skin	human	Hs 839.T	CRL-7572*
Melanoma	skin	human	Hs 852.T	CRL-7585*

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Melanoma	skin	human	Hs 906(A).T	CRL-7653*
Melanoma	skin	human	Hs 906(B).T	CRL-7654*
Melanoma	skin	human	Hs 908.Sk	CRL-7658*
Melanoma	skin	human	Hs 936.T	CRL-7686*
Melanoma	skin	human	Hs 936.T(C1)	CRL-7687*
Melanoma	skin	human	Hs 939.T	CRL-7690*
Melanoma	skin	human	A101D	CRL-7898*
Melanoma	skin	human	CHL-1	CRL-9446†
Melanoma	skin	human	HMCB (Human Melanoma Cell Bowles)	CRL-9607†
Melanoma	skin	mouse	B16-F0	CRL-6322*
Melanoma	skin	mouse	B16-F1	CRL-6323*
Melanoma	skin	mouse	B16-F10	CRL-6475*
Melanoma	skin, melanocyte	mouse	Clone M-3	CCL-53.1
Melanoma, amelanotic	skin	human	C32TG	CRL-1579
Melanoma, amelanotic	skin	human	C32	CRL-1585
Melanoma, malignant	connective tissue	human	Hs 934.T	CRL-7684*
Melanoma, malignant	connective tissue	human	Hs 935.T	CRL-7685*
Melanoma, malignant	skin	human	G-361	CRL-1424
Melanoma, malignant	skin	human	A-375	CRL-1619
Melanoma, malignant	skin	human	A375.S2	CRL-1872
Melanoma, malignant	skin	human	COLO 829	CRL-1974
Melanoma, malignant	skin	human	Hs 940.T	CRL-7691*
Melanoma, malignant	skin	human	HT-144	HTB-63
Melanoma, malignant	skin	human	Malme-3M	HTB-64
Melanoma, malignant	skin	human	RPMI-7951	HTB-66
Melanoma, malignant	skin	human	SK-MEL-5	HTB-70
Melanoma, malignant	skin	human	SK-MEL-24	HTB-71
Melanoma, malignant	skin	human	SK-MEL-28	HTB-72
Melanoma, malignant	skin	human	SK-MEL-31	HTB-73
Melanoma, melanotic	skin	hamster, Syrian golden	RPMI 1846	CCL-49
Melanoma, nodular, in vertical growth phase	skin, melanocyte	human	WM278	CRL-2809
Melanoma, nodular, in vertical growth phase	skin, melanocyte; from lung metastases in mice	human	451Lu	CRL-2813
Melanoma, primary superficial, in radial growth phase/vertical growth phase	skin	human	WM1552C	CRL-2808
Melanoma, primary superficial, in radial growth phase/vertical growth phase	skin, melanocyte	human	WM35	CRL-2807
Melanoma, primary superficial, in vertical growth phase	skin, melanocyte	human	WM793B	CRL-2806
Melanoma, primary superficial, in vertical growth phase	skin, melanocyte; from lung metastases in mice	human	1205Lu	CRL-2812
Melanoma, primary, in vertical growth phase	skin, melanocyte	human	WM39	CRL-2811
Melanoma, transfected to express filamin-1	skin	human	A7	CRL-2500
Neuroblastoma	brain	human	CHP-212	CRL-2273
Neuroblastoma	brain, neuroblast	human	IMR-32	CCL-127
Neuroblastoma	brain, neuroblast	mouse	Neuro-2a	CCL-131
Neuroblastoma	brain, neuroblast	mouse	NB41A3	CCL-147
Neuroblastoma	brain, neuroblast	mouse	N1E-115	CRL-2263
Neuroblastoma	central nervous system; nitrosoethylurea-induced	rat	B35	CRL-2754
Neuroglioma	brain	human	H4	HTB-148
Osteoma, benign osteoid	bone	human	Hs 900.T	CRL-7646*
Osteoma, benign osteoid	bone	human	Hs 903.T	CRL-7649*
Osteoma, benign osteoid	bone	human	Hs 919.T	CRL-7672*
Osteosarcoma	bone	dog	D17	CRL-6248*
Osteosarcoma	bone	dog	D22	CRL-6250*
Osteosarcoma	bone	dog	D17	CRL-8468†
Osteosarcoma	bone	human	143.98.2	CRL-11226†
Osteosarcoma	bone	human	G-292, clone A141B1	CRL-1423

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Osteosarcoma	bone	human	MG-63	CRL-1427
Osteosarcoma	bone	human	HOS	CRL-1543
Osteosarcoma	bone	human	KHOS/NP (R-970-5)	CRL-1544
Osteosarcoma	bone	human	KHOS-240S	CRL-1545
Osteosarcoma	bone	human	KHOS-321H	CRL-1546
Osteosarcoma	bone	human	MNNG/HOS (Cl #5)	CRL-1547
Osteosarcoma	bone	human	Hs 3.T	CRL-7005*
Osteosarcoma	bone	human	Hs 39.T	CRL-7023*
Osteosarcoma	bone	human	Hs 184.T	CRL-7134*
Osteosarcoma	bone	human	Hs 188.T	CRL-7140*
Osteosarcoma	bone	human	Hs 387.T	CRL-7263*
Osteosarcoma	bone	human	Hs 704.T	CRL-7444*
Osteosarcoma	bone	human	Hs 707(A).T	CRL-7448*
Osteosarcoma	bone	human	Hs 735.T	CRL-7471*
Osteosarcoma	bone	human	Hs 755(B).T	CRL-7489*
Osteosarcoma	bone	human	Hs 781.T	CRL-7511*
Osteosarcoma	bone	human	Hs 792(B).T	CRL-7521*
Osteosarcoma	bone	human	Hs 805.T	CRL-7537*
Osteosarcoma	bone	human	Hs 811.T	CRL-7543*
Osteosarcoma	bone	human	Hs 866.T	CRL-7602*
Osteosarcoma	bone	human	Hs 870.T	CRL-7606*
Osteosarcoma	bone	human	Hs 871.T	CRL-7609*
Osteosarcoma	bone	human	Hs 889.T	CRL-7626*
Osteosarcoma	bone	human	Hs 890.T	CRL-7628*
Osteosarcoma	bone	human	Murphy	CRL-7722*
Osteosarcoma	bone	human	R-970-5	CRL-7723*
Osteosarcoma	bone	human	TE 417.T	CRL-7765*
Osteosarcoma	bone	human	TE 418.T	CRL-7766*
Osteosarcoma	bone	human	TO 203.T	CRL-7780*
Osteosarcoma	bone	human	HT 728.T	CRL-7783*
Osteosarcoma	bone	human	Hs 14.T	CRL-7823*
Osteosarcoma	bone	human	T1-73	CRL-7943*
Osteosarcoma	bone	human	143B	CRL-8303†
Osteosarcoma	bone	human	143B PML BK TK	CRL-8304†
Osteosarcoma	bone	human	Saos-2	HTB-85
Osteosarcoma	bone	human	U-2 OS	HTB-96
Osteosarcoma	bone	rat	UMR-106	CRL-1661
Osteosarcoma	bone	rat	UMR-108	CRL-1663
Osteosarcoma	bone, connective tissue	dog	CF11.T	CRL-6217*
Osteosarcoma	bone, connective tissue	human	Hs 88.T	CRL-7060*
Osteosarcoma	bone, connective tissue	human	Hs 864.T	CRL-7600*
Osteosarcoma	thymus	cat	FC95.Thy	CRL-6114*
Osteosarcoma, multipotential sarcoma	bone	human	SJSA-1	CRL-2098
Papilloma	pharynx	human	Hs 840.T	CRL-7573*
Papilloma	skin	rabbit, cottontail	CTPS	CRL-6496*
Papilloma, squamous	skin	human	Hs 416.T	CRL-7289*
Papilloma, transitional cell	bladder, urinary	human	RT4	HTB-2
Pheochromocytoma	adrenal gland	rat	PC-12	CRL-1721
Pheochromocytoma	adrenal gland	rat	PC-12	CRL-1721
Plasmacytoma, myeloma	B lymphoblast	human	U266B1	TIB-196
Plasmacytoma, myeloma	B lymphocyte	mouse	MOPC-31C	CCL-130
Plasmacytoma, myeloma	B lymphocyte	mouse	MPC-11	CCL-167
Plasmacytoma, myeloma	B lymphocyte	mouse	P1.17	TIB-10
Plasmacytoma, myeloma	B lymphocyte	mouse	C1.18.4	TIB-11
Plasmacytoma, myeloma	B lymphocyte	mouse	HOPC 1F/12	TIB-13
Plasmacytoma, myeloma	B lymphocyte	mouse	MPC 11 OUA^r	TIB-15
Plasmacytoma, myeloma	B lymphocyte	mouse	XC1.5/51	TIB-16
Plasmacytoma, myeloma	B lymphocyte	mouse	XS63	TIB-17
Plasmacytoma, myeloma	B lymphocyte	mouse	S194/5.XXO-1	TIB-19
Plasmacytoma, myeloma	B lymphocyte	mouse	MOPC 315	TIB-23
Plasmacytoma, myeloma	B lymphocyte	mouse	J558	TIB-6

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Plasmacytoma, myeloma	B lymphocyte	mouse	P3.6.2.8.1	TIB-8
Plasmacytoma, myeloma	B lymphocyte, peripheral blood	human	RPMI 8226	CCL-155
Plasmacytoma, myeloma	bone marrow, B lymphocyte	human	NCI-H929	CRL-9068†
Primitive neuroectodermal, malignant	retroperitoneal	human	SK-PN-DW	CRL-2139
Retinoblastoma	eye, retina	human	WERI-Rb-1	HTB-169
Retinoblastoma	eye, retina	human	Y79	HTB-18
Rhabdomyosarcoma	connective tissue	human	TE 441.T	CRL-7767*
Rhabdomyosarcoma	connective tissue	human	TE 617.T	CRL-7774*
Rhabdomyosarcoma	connective tissue	human	Hs 729.T	CRL-7862*
Rhabdomyosarcoma	mixed connective and soft	human	TE 381.T	CRL-7763*
Rhabdomyosarcoma	muscle	human	RD	CCL-136
Rhabdomyosarcoma	muscle	human	A-673	CRL-1598
Rhabdomyosarcoma	muscle	human	Hs 729	HTB-153
Rhabdomyosarcoma	muscle	human	A-204	HTB-82
Rhabdomyosarcoma	muscle, skeletal	human	Hs 94.T	CRL-7064*
Rhabdomyosarcoma	unknown	human	TE 159.T	CRL-7752*
Rhabdomyosarcoma	unknown	human	TE 125.T	CRL-7945*
Rhabdomyosarcoma, renal	kidney	human	Hs 926.T	CRL-7678*
Sarcoma	connective tissue	cat	FC100.T	CRL-6115*
Sarcoma	connective tissue	mouse	EHS	CRL-2108
Sarcoma	spleen	cat	FC100.Sp	CRL-6116*
Sarcoma	unknown	mouse	CCRF S-180 II	CCL-8
Sarcoma	unknown	mouse	Sarcoma 180	TIB-66
Sarcoma	unknown	rat	Jensen Sarcoma	CCL-45
Sarcoma	unknown	rat	RR1022	CCL-47
Sarcoma (anaplastic osteosarcoma or Ewing's sarcoma)	bone	human	SK-ES-1	HTB-86
Sarcoma or lymphoma	lung	human	Hs 57.T	CRL-7037*
Sarcoma, Ewing's	bone	human	Hs 822.T	CRL-7556*
Sarcoma, Ewing's	bone	human	Hs 863.T	CRL-7598*
Sarcoma, Ewing's	bone	human	RD-ES	HTB-166
Sarcoma, giant cell	bone	human	Hs 706.T	CRL-7447*
Sarcoma, giant cell	bone	human	Hs 737.T	CRL-7473*
Sarcoma, giant cell	bone	human	Hs 821.T	CRL-7554*
Sarcoma, giant cell	bone	human	Hs 846.T	CRL-7579*
Sarcoma, giant cell	bone	human	Hs 883.T	CRL-7617*
Sarcoma, giant cell	connective tissue	human	Hs 127.T	CRL-7081*
Sarcoma, giant cell	vertebral column	human	Hs 814.T	CRL-7547*
Sarcoma; heterozygous for tuberin; tuberous sclerosis model	unknown, cutaneous	mouse	tsc2 ang1	CRL-2620
Sarcoma, pagetoid	skin	human	Hs 925.T	CRL-7677*
Sarcoma, reticulum cell	bone marrow	cat	FC11.BM	CRL-6088*
Sarcoma, reticulum cell	B lymphocyte	mouse	A20	TIB-208
Sarcoma, reticulum cell	B lymphocyte	mouse	X16C8.5	TIB-209
Sarcoma, reticulum cell	lymph node	human	Hs 324.T	CRL-7239*
Sarcoma, reticulum cell	monocyte/macrophage	mouse	J774A.1	TIB-67
Sarcoma, spindle cell	connective tissue	human	Hs 132.T	CRL-7085*
Sarcoma, synovial	connective tissue	human	Hs 701.T	CRL-7440*
Sarcoma, synovial	synovium	human	SW 982	HTB-93
Sarcoma, uterine	uterus	human	MES-SA	CRL-1976
Sarcoma, uterine	uterus	human	MES-SA/Dx5	CRL-1977
Sarcoma, uterine	uterus	human	MES-SA/MX2	CRL-2274
Schwannoma	Schwann cell	rat	RT4-D6P2T	CRL-2768
Teratocarcinoma	stem cell, nullipotent	human	NCCIT	CRL-2073
Teratocarcinoma	testis	mouse	NULLI-SCC1	CRL-1566
Teratocarcinoma, carcinoma	embryo	mouse	P19	CRL-1825

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines by Disease

Disease	Source	Species	Name	ATCC® No.
Teratocarcinoma, carcinoma	embryonal stem cell, nullipotent	mouse	NE	CRL-2070
Teratocarcinoma, carcinoma	embryonal stem cell, nullipotent	mouse	NF-1	CRL-2075
Teratocarcinoma, carcinoma	embryonal stem cell, pluripotent	mouse	SCC-PSA1	CRL-1535
Teratoma	keratinocyte	mouse	XB-2	CL-177
Teratoma	ovary	human	TE 84.T	CRL-7944*
Teratoma, sacrococcygeal	bone	human	TE 76.T	CRL-7732*
Teratoma, sacrococcygeal	bone	human	TE 130.T	CRL-7746*
Tumor	bladder, urinary	rat	NBT-II	CRL-1655
Tumor	lung, transformed	mouse	TC-1	JHU-1
Tumor	mammary gland	mouse	4T1	CRL-2539
Tumor	mammary gland	mouse	MMT 060562	CCL-51
Tumor	mammary gland	mouse	C127I	CRL-1616
Tumor	mammary gland	mouse	C127:LT	CRL-1804
Tumor	pancreas, exocrine	rat	AR42J	CRL-1492
Tumor	pancreas, exocrine	rat	ARIP	CRL-1674
Tumor	pituitary	mouse	AtT-20	CCL-89
Tumor	pituitary	mouse	AtT-20/D16v-F2	CRL-1795
Tumor	pituitary	rat	GH_1	CCL-82
Tumor	pituitary	rat	GH_3	CCL-82.1
Tumor	pituitary	rat	GH_4C_1	CCL-82.2
Tumor	pituitary	rat	MMQ	CRL-10609†
Tumor	spleen	mouse	MM7-11.Sp	CRL-6381*
Tumor	unknown	dog	A-72	CRL-1542
Tumor, AMLV induced	monocyte	mouse	WEHI-274.1	CRL-1679
Tumor, AMLV induced	monocyte	mouse	WEHI-265.1	TIB-204
Tumor, AMLV induced	monocyte/macrophage	mouse	RAW 309 Cr.1	TIB-69
Tumor, AMLV induced	monocyte/macrophage	mouse	WR19M.1	TIB-70
Tumor, AMLV induced	monocyte/macrophage	mouse	RAW 264.7	TIB-71
Tumor, DMBA induced	unknown	rat	Rn6T	CRL-6601*
Tumor, acinar cell	pancreas	mouse	266-6	CRL-2151
Tumor, chemically induced	unknown	rat	Rn 3T	CRL-6511*
Tumor, chemically induced	unknown	rat	Rn 4T	CRL-6512*
Tumor, glucose-stimulated insulin release	pituitary	mouse	AtT-20ins (CGT-6)	CRL-11285†
Tumor, islet cell, insulinoma	pancreas	mouse, transgenic	TGP61	CRL-2135
Tumor, islet cell, insulinoma	pancreas	mouse, transgenic	TGP52	CRL-2140
Tumor, Leydig cell	testis	mouse	I-10	CCL-83
Tumor, Leydig cell	testis	mouse	MLTC-1	CRL-2065
Tumor, Leydig cell	testis	rat	LC-540	CCL-43
Tumor, Leydig cell	testis	rat	R2C	CCL-97
Tumor, malignant primitive neuroectodermal	brain, cerebellum	human	PFSK-1	CRL-2060
Tumor, nonneoplastic	oral	human	Hs 53.T	CRL-7033*
Tumor, premalignant	mammary gland	mouse	CL-S1	CRL-1615
Tumor, rhabdoid	kidney	human	G-401	CRL-1441
Tumor, small cell	pancreas	mouse, transgenic	TGP55	CRL-2150
Tumor, smooth muscle-like, methylnitrosourea induced	brain	mouse	BC_3H1	CRL-1443
Xanthogranuloma	skin	human	Hs 156.T	CRL-7102*

* Part of the NBL collection; see page 12. † Patent item; see page 12.

Tumor Cell Lines from Metastatic Sites

These tumor cells are known to be from metastatic sites. They are listed by disease state and primary site as provided by the depositor. Cell lines that are not from metastatic sites or whose primary/metastatic status is unknown are listed in the previous index starting on page 153.

For more information on a cell line, see the main list starting on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Disease	Primary Site	Metastatic Site	Species	Name	ATCC® No.
Adenocarcinoma	colon	connective tissue, trunk	human	Hs 698.T	CRL-7435*
Adenocarcinoma	colon	ovary	human	SW 626	HTB-78
Adenocarcinoma	colon	peritoneum	human	SNU-C1	CRL-5972
Adenocarcinoma	liver	ascites	human	SK-HEP-1	HTB-52
Adenocarcinoma	lung	lymph node	human	NCI-H1648	CRL-5882
Adenocarcinoma	lung	lymph node	human	NCI-H1819	CRL-5897
Adenocarcinoma	lung	lymph node	human	NCI-H2009	CRL-5911
Adenocarcinoma	lung	pleural effusion	human	NCI-H1355	CRL-5865
Adenocarcinoma	lung	pleural effusion	human	NCI-H1792	CRL-5895
Adenocarcinoma	lung	pleural effusion	human	NCI-H676B	HTB-179
Adenocarcinoma	lung	pleural effusion	human	Calu-3	HTB-55
Adenocarcinoma	lung	soft tissue	human	NCI-H1573	CRL-5877
Adenocarcinoma	mammary gland	brain	human	MDA-MB-361	HTB-27
Adenocarcinoma	mammary gland	pleural effusion	human	HCC1428	CRL-2327
Adenocarcinoma	mammary gland	pleural effusion	human	AU565	CRL-2351
Adenocarcinoma	mammary gland	pleural effusion	human	MDA-MB-415	HTB-128
Adenocarcinoma	mammary gland	pleural effusion	human	MDA-MB-436	HTB-130
Adenocarcinoma	mammary gland	pleural effusion	human	MDA-MB-468	HTB-132
Adenocarcinoma	mammary gland	pleural effusion	human	CAMA-1	HTB-21
Adenocarcinoma	mammary gland	pleural effusion	human	MCF7	HTB-22
Adenocarcinoma	mammary gland	pleural effusion	human	MDA-MB-231	HTB-26
Adenocarcinoma	mammary gland	pleural effusion	human	SK-BR-3	HTB-30
Adenocarcinoma	ovary	ascites	human	NIH:OVCAR-3	HTB-161
Adenocarcinoma	ovary	ascites	human	SK-OV-3	HTB-77
Adenocarcinoma	ovary	fallopian tube	human	Caov-4	HTB-76
Adenocarcinoma	pancreas	ascites	human	AsPC-1	CRL-1682
Adenocarcinoma	pancreas	liver	human	Capan-1	HTB-79
Adenocarcinoma	pancreas	spleen	human	SW 1990	CRL-2172
Adenocarcinoma	prostate	bone	human	PC-3	CRL-1435
Adenocarcinoma	prostate	bone	human	MDA PCa 2b	CRL-2422
Adenocarcinoma	prostate	prostate	mouse, transgenic	TRAMP-C3	CRL-2732
Adenocarcinoma	unknown	bone	human	Hs 696	HTB-151
adenocarcinoma	uterus, endometrium	lymph node	human	AN3 CA	HTB-111
Adenocarcinoma, bronchoalveolar carcinoma	lung	pleural effusion	human	NCI-H1650	CRL-5883
Adenocarcinoma, bronchoalveolar carcinoma	lung	pleural effusion	human	NCI-H1666	CRL-5885
Adenocarcinoma, bronchoalveolar carcinoma	lung	pleural effusion	human	NCI-H1781	CRL-5894
Adenocarcinoma, colorectal	colon	ascites	human	COLO 205	CCL-222
Adenocarcinoma, colorectal	colon	ascites	human	COLO 201	CCL-224

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines from Metastatic Sites

Disease	Primary Site	Metastatic Site	Species	Name	ATCC® No.
Adenocarcinoma, colorectal	colon	lymph node	human	SW620	CCL-227
Adenocarcinoma, colorectal	colon	lymph node, left supraclavicular	human	LoVo	CCL-229
Adenocarcinoma, colorectal	colon	ascites	human	SK-CO-1	HTB-39
Adenocarcinoma, malignant papillary serous	ovary	ascites	human	OV-90	CRL-11732†
Adenocarcinoma, non-small cell lung cancer	lung	ascites	human	NCI-H2405	CRL-5944
Adenocarcinoma, non-small cell lung cancer	lung	liver	human	NCI-H1755	CRL-5892
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H838	CRL-5844
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H920	CRL-5850
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H1568	CRL-5876
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H1623	CRL-5881
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H1693	CRL-5887
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H1993	CRL-5909
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H2023	CRL-5912
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H2030	CRL-5914
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H2087	CRL-5922
Adenocarcinoma, non-small cell lung cancer	lung	lymph node	human	NCI-H2291	CRL-5939
Adenocarcinoma, non-small cell lung cancer	lung	pleural effusion	human	NCI-H969	CRL-5852
Adenocarcinoma, non-small cell lung cancer	lung	pleural effusion	human	NCI-H1437	CRL-5872
Adenocarcinoma, non-small cell lung cancer	lung	pleural effusion	human	NCI-H2122	CRL-5985
Adenocarcinoma, non-small cell lung cancer	lung	soft tissue	human	NCI-H1944	CRL-5907
Adenocarcinoma, papillary	lung	lymph node	human	NCI-H1404	CRL-5819
Adenocarcinoma, papillary	lung	lymph node	human	NCI-H820	HTB-181
Adenocarcinoma, papillary	lung	pericardial fluid	human	NCI-H441	HTB-174
Carcinoma	cervix	lymph node	human	HT-3	HTB-32
Carcinoma	kidney	lymph node	human	Hs 891.T	CRL-7629*
Carcinoma	mammary gland	pleural effusion	human	MB 157	CRL-7721*
Carcinoma	mammary gland	pleural effusion	human	MDA-MB-330	HTB-127
Carcinoma	mammary gland	pleural effusion	human	MDA-MB-453	HTB-131
Carcinoma	mammary gland	pleural effusion	human	MDA-MB-157	HTB-24
Carcinoma	pancreas	lymph node	human	Hs 766T	HTB-134
Carcinoma	pharynx	pleural effusion	human	Detroit 562	CCL-138
Carcinoma	prostate	brain	human	DU 145	HTB-81
Carcinoma	prostate	lymph node, left supraclavicular	human	LNCaP clone FGC	CRL-1740
Carcinoma	rectum	liver	human	NCI-H630	CRL-5833
Carcinoma	unknown	omentum	human	Hs 904.T	CRL-7651*
Carcinoma	vulva	lymph node	human	SW 962	HTB-118
Carcinoma, extrapulmonary small cell; neuroendocrine	prostate	lymph node	human	NCI-H660	CRL-5813
Carcinoma, bronchioalveolar, non-small cell lung cancer	lung	lymph node	human	NCI-H650	CRL-5835
Carcinoma, bronchogenic	lung, bronchus	subcutaneous	human	ChaGo-K-1	HTB-168

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Tumor Cell Lines from Metastatic Sites

Disease	Primary Site	Metastatic Site	Species	Name	ATCC® No.
Carcinoma, classic small cell lung cancer	lung	ascites	human	NCI-H1694	CRL-5888
Carcinoma, classic small cell lung cancer	lung	bone marrow	human	NCI-H711	CRL-5836
Carcinoma, classic small cell lung cancer	lung	bone marrow	human	NCI-H719	CRL-5837
Carcinoma, classic small cell lung cancer	lung	bone marrow	human	NCI-H1092	CRL-5855
Carcinoma, classic small cell lung cancer	lung	bone marrow	human	NCI-H1284	CRL-5861
Carcinoma, classic small cell lung cancer	lung	brain	human	NCI-H250	CRL-5828
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H889	CRL-5817
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H740	CRL-5840
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H748	CRL-5841
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H1105	CRL-5856
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H1436	CRL-5871
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H1876	CRL-5902
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H1930	CRL-5906
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H1994	CRL-5910
Carcinoma, classic small cell lung cancer	lung	lymph node	human	NCI-H2059	CRL-5916
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H187	CRL-5804
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H378	CRL-5808
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H60	CRL-5821
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H220	CRL-5825
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H847	CRL-5846
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H865	CRL-5849
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H1304	CRL-5862
Carcinoma, classic small cell lung cancer	lung	pleural effusion	human	NCI-H2081	CRL-5920
Carcinoma, classic small cell lung cancer	lung	soft tissue	human	NCI-H774	CRL-5842
Carcinoma, clear cell	kidney	skin	human	Caki-1	HTB-46
Carcinoma, colorectal	colon	lung	human	T84	CCL-248
Carcinoma, ductal	mammary gland	lymph node	human	HCC1008	CRL-2320
Carcinoma, ductal	mammary gland	pleural effusion	human	MDA-MB-435S	HTB-129
Carcinoma, ductal	mammary gland	pleural effusion	human	T-47D	HTB-133
Carcinoma, ductal	mammary gland	pleural effusion	human	MDA-MB-134-VI	HTB-23
Carcinoma, ductal	mammary gland	pleural effusion	human	MDA-MB-175-VII	HTB-25
Carcinoma, ductal	mammary gland, epithelium	ascites	human	ZR-75-1	CRL-1500
Carcinoma, ductal	mammary gland, epithelium	ascites	human	ZR-75-30	CRL-1504
Carcinoma, ductal	pancreas	liver	human	SU.86.86	CRL-1837

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Tumor Cell Lines from Metastatic Sites

Disease	Primary Site	Metastatic Site	Species	Name	ATCC® No.
Carcinoma, embryonal malignant	unknown	lung	human	Tera-1	HTB-105
Carcinoma, embryonal malignant	unknown	lung	human	Tera-2	HTB-106
Carcinoma, epidermoid	unknown	lymph nodes	human	A388	CRL-7905*
Carcinoma, epidermoid	cervix	lymph node	human	MS751	HTB-34
Carcinoma, epidermoid	cervix	mesentery, small bowel	human	Ca Ski	CRL-1550
Carcinoma, epidermoid	cervix	omentum	human	ME-180	HTB-33
Carcinoma, epidermoid	lung	pleura	human	Calu-1	HTB-54
Carcinoma, epidermoid	lung	pleural effusion	human	Hs 284.Pe	CRL-7228*
Carcinoma, epithelioid	bone	bone marrow	human	VA-ES-BJ	CRL-2138
Carcinoma, gastric	stomach	ascites	human	SNU-5	CRL-5973
Carcinoma, gastric	stomach	ascites	human	SNU-16	CRL-5974
Carcinoma, gastric	stomach	liver	human	NCI-N87	CRL-5822
Carcinoma, gastric	stomach	muscle	human	Hs 746T	HTB-135
Carcinoma, gastric	stomach	pleural effusion	human	KATO III	HTB-103
Carcinoma, intestinal	unknown	lymph node	human	Hs 692(A).T	CRL-7428*
Carcinoma, large cell	lung	pleural effusion	human	NCI-H460	HTB-177
Carcinoma, large cell lung cancer	lung	lymph node	human	NCI-H661	HTB-183
Carcinoma, large cell neuroendocrine	lung	lymph node	human	NCI-H1299	CRL-5803
Carcinoma, large cell neuroendocrine	lung	lymph node	human	NCI-H1155	CRL-5818
Carcinoma, large cell neuroendocrine	lung	lymph node	human	NCI-H2106	CRL-5923
Carcinoma, large cell poorly differentiatied	lung	brain	human	NCI-H1915	CRL-5904
Carcinoma, malignant pluripotent embryonal; neuroendocrine	testis	lung	human	NTERA-2 cl.D1	CRL-1973
Carcinoma, mixed adenosquamous	lung	pleural effusion	human	NCI-H647	CRL-5834
Carcinoma, neuroendocrine, non-small cell lung cancer	lung	lymph node	human	NCI-H1770	CRL-5893
Carcinoma, neuroendocrine, squamous cell	lung	lymph node	human	NCI-H1385	CRL-5867
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H211	CRL-5824
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H1238	CRL-5859
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H1618	CRL-5879
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H1882	CRL-5903
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H2195	CRL-5931
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H2196	CRL-5932
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H2107	CRL-5983
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H2108	CRL-5984
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H209	HTB-172
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H146	HTB-173
Carcinoma, small cell lung cancer	lung	bone marrow	human	NCI-H345	HTB-180
Carcinoma, small cell lung cancer	lung	cervix	human	NCI-H1870	CRL-5901

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Tumor Cell Lines from Metastatic Sites

Disease	Primary Site	Metastatic Site	Species	Name	ATCC® No.
Carcinoma, small cell lung cancer	lung	cervix	human	NCI-H1341	CRL-5864
Carcinoma, small cell lung cancer	lung	liver	human	DMS 153	CRL-2064
Carcinoma, small cell lung cancer	lung	liver	human	NCI-H735	CRL-5978
Carcinoma, small cell lung cancer	lung	lymph node	human	NCI-H1184	CRL-5858
Carcinoma, small cell lung cancer	lung	lymph node	human	NCI-H1926	CRL-5905
Carcinoma, small cell lung cancer	lung	lymph node	human	NCI-H2029	CRL-5913
Carcinoma, small cell lung cancer	lung	lymph node	human	NCI-H2141	CRL-5927
Carcinoma, small cell lung cancer	lung	lymph node	human	NCI-H2198	CRL-5933
Carcinoma, small cell lung cancer	lung	lymph node	human	NCI-H2330	CRL-5940
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H1048	CRL-5853
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H1522	CRL-5874
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H2171	CRL-5929
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H69	HTB-119
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H128	HTB-120
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H446	HTB-171
Carcinoma, small cell lung cancer	lung	pleural effusion	human	NCI-H82	HTB-175
Carcinoma, small cell lung cancer	unknown	adrenal gland	human	NCI-H510A	HTB-184
Carcinoma, squamous cell	lung	pleural effusion	human	NCI-H1869	CRL-5900
Carcinoma, squamous cell	lung	pleural effusion	human	SK-MES-1	HTB-58
Carcinoma, squamous cell	nasal septum	pleural effusion	human	RPMI 2650	CCL-30
Carcinoma, squamous cell mesothelioma	lung, pleura	pleural effusion	human	NCI-H226	CRL-5826
Carcinoma, variant small cell lung cancer	lung	bone marrow	human	NCI-H526	CRL-5811
Carcinoma, variant small cell lung cancer	lung	lymph node	human	NCI-H524	CRL-5831
Carcinoma, variant small cell lung cancer	lung	lymph node	human	NCI-H841	CRL-5845
Carcinoma, variant small cell lung cancer	lung	pleural effusion	human	NCI-H196	CRL-5823
Fibrosarcoma	connective tissue	lung or bronchus	human	Hs 913(B).T	CRL-7664*
Fibrosarcoma	connective tissue	lung or bronchus	human	Hs 913(C).T	CRL-7665*
Fibrosarcoma	connective tissue	lymph node	human	Hs 414.T	CRL-7287*
Fibrosarcoma	unknown	lung	human	Hs 913T	HTB-152
Fibrosarcoma	unknown	lung or bronchus	human	Hs 913(D).T	CRL-7666*
Fibrosarcoma	unknown	lung or bronchus	human	Hs 913(F).T	CRL-7668*
Histiocytoma, fibrous	unknown	lung	human	GCT	TIB-223
Leukemia, chronic myelogenous	bone marrow, undifferentiated granulocyte	pleural effusion	human	K-562	CCL-243
Lymphangiectasia	B lymphocyte	pleural effusion	human	DS-1	CRL-11102†
Lymphoma, B cell	B lymphoblast	peritoneal effusion	human	JSC-1	JHU-32
Lymphoma, Burkitt's	B lymphoblast	ascites	human	ST486	CRL-1647
Lymphoma, Burkitt's	B lymphoblast	ascites	human	P3HR-1	HTB-62

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Tumor Cell Lines from Metastatic Sites

Disease	Primary Site	Metastatic Site	Species	Name	ATCC® No.
Lymphoma, Burkitt's	B lymphocyte	ovary	human	EB2	HTB-61
Lymphoma, diffuse large cell non-Hodgkin's	B lymphocyte	pleural effusion	human	Pfeiffer	CRL-2632
Lymphoma, diffuse mixed	B lymphoblast	ascites	human	HT	CRL-2260
Lymphoma, Hodgkin's disease	lymph node	skin	human	TO 175.T	CRL-7779*
Lymphoma, large cell immunoblastic	unknown	pleural effusion	human	SR	CRL-2262
Lymphoma, non-Hodgkin's	B lymphoblast	ascites	human	RL	CRL-2261
Lymphoma, non-Hodgkin's B cell	unknown	lymph node	human	Farage	CRL-2630
Lymphoma, undifferentiated	B lymphoblast	ascites	human	MC116	CRL-1649
Medulloblastoma	brain, cerebellum	ascites, peritoneum	human	D283 Med	HTB-185
Melanoma	skin	lung	human	Hs 895.T	CRL-7637*
Melanoma	skin	lymph node	human	Hs 944.T	CRL-7693*
Melanoma	skin	lymph node, neck	human	Hs 834.T	CRL-7568*
Melanoma	skin	pleural effusion	human	SH-4	CRL-7724*
Melanoma	skin	skin	human	WM-266-4	CRL-1676
Melanoma, amelanotic	intestines, pancreas	bone, pelvis	human	Hs 700T	HTB-147
Melanoma, amelanotic	skin	lymph node	human	Hs 695T	HTB-137
Melanoma, amelanotic	skin	lymph node	human	Hs 294T	HTB-140
Melanoma, inguinal	skin	lymph node	human	Hs 688(B).T	CRL-7426*
Melanoma, malignant	skin	lymph node	human	A2058	CRL-11147†
Melanoma, malignant	skin	lymph node	human	MeWo	HTB-65
Melanoma, malignant	skin	lymph node	human	SK-MEL-3	HTB-69
Melanoma, malignant	skin	skin metastasis	human	SK-MEL-2	HTB-68
Melanoma, malignant	skin	thoracic duct	human	SK-MEL-1	HTB-67
Mesothelioma	pleura	pleural effusion	human	NCI-H28	CRL-5820
Mesothelioma	pleura	pleural effusion	human	NCI-H2052	CRL-5915
Mesothelioma	unknown	pleural effusion	human	NCI-H2452	CRL-5946
Mesothelioma, biphasic	lung	pleural effusion	human	MSTO-211H	CRL-2081
Neuroblastoma	brain	bone marrow	human	SH-SY5Y	CRL-2266
Neuroblastoma	brain	bone marrow	human	BE(2)-M17	CRL-2267
Neuroblastoma	brain	bone marrow	human	BE(2)-C	CRL-2268
Neuroblastoma	brain	bone marrow	human	SK-N-BE(2)	CRL-2271
Neuroblastoma	brain	bone marrow	human	SK-N-SH	HTB-11
Neuroblastoma, embryonal	brain, neuroblast	bone marrow	human	SK-N-AS	CRL-2137
Neuroblastoma, embryonal	brain, neuroblast	bone marrow	human	SK-N-FI	CRL-2142
Neuroblastoma, embryonal	brain, neuroblast	bone marrow	human	SK-N-DZ	CRL-2149
Neuroepithelioma	brain	supraorbital area	human	MC-IXC	CRL-2270
Neuroepithelioma	brain	supraorbital area	human	SK-N-MC	HTB-10
Non-small cell lung cancer	lung	pleural effusion	human	NCI-H2110	CRL-5924
Osteosarcoma	bone	lung	dog	D-17	CCL-183
Osteosarcoma	bone	lung	human	Hs 860.T	CRL-7595*
Osteosarcoma	bone	lung	human	Hs 888.T	CRL-7622*
Osteosarcoma	bone	lung	human	Hs 894(A).T	CRL-7631*
Osteosarcoma	bone	lung	human	Hs 894(B).T	CRL-7632*
Osteosarcoma	bone	lung	human	Hs 894(C).T	CRL-7633*
Osteosarcoma	bone	lung	human	Hs 894(D).T	CRL-7634*
Osteosarcoma	bone	lung	human	Hs 899(A).T	CRL-7642*
Osteosarcoma	bone	lung	human	Hs 899(B).T	CRL-7643*
Osteosarcoma	bone	lung	human	Hs 899(C).T	CRL-7644*
Osteosarcoma	bone	lung	human	Hs 899(D).Lu	CRL-7645*
Osteosarcoma	bone	lymph node, cervical	human	Hs 792(A).T	CRL-7520*
Osteosarcoma	bone, femur	bone	human	Hs 845.T	CRL-7577*
Rhabdomyosarcoma	muscle	bone marrow	human	SJRH30	CRL-2061
Teratocarcinoma	ovary	ascites	human	PA-1	CRL-1572
Tumor	unknown	spleen	viper, Russell's	VSW	CCL-129
Tumor, Wilms'	kidney	pleural effusion	human	SK-NEP-1	HTB-48

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.
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Tumor/Normal Matched Cell Line Pairs

Matched cell line pairs provide a valuable resource for cancer studies. The first section lists the tumor and normal cell lines established from the same patient. The second section lists the primary and metastatic cell lines from the same patient. For more information on a cell line, see the main index starting on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Cancer Type	Tissue Source (Tumor)	Name	ATCC® No.	Tissue Source (Normal)	Name	ATCC® No.
Tumor and Normal Cell Lines from the Same Individual						
Adenocarcinoma	lung	NCI-H1395	CRL-5868	B lymphoblast	NCI-BL1395	CRL-5957
Adenocarcinoma	lymph node metastasis; lung primary	NCI-H2009	CRL-5911	B lymphoblast	NCI-BL2028	CRL-5962
Adenocarcinoma; non-small cell lung cancer	lymph node metastasis; lung primary	NCI-H2087	CRL-5922	B lymphoblast	NCI-BL2087	CRL-5965
Adenocarcinoma; non-small cell lung cancer	pleural effusion metastasis; lung primary	NCI-H2126	CCL-256	B lymphoblast	NCI-BL2126	CCL-256.1
Adenocarcinoma; non-small cell lung cancer	pleural effusion metastasis; lung primary	NCI-H1437	CRL-5872	B lymphoblast	NCI-BL1437	CRL-5958
Adenocarcinoma; non-small cell lung cancer	pleural effusion metastasis; lung primary	NCI-H2122	CRL-5985	B lymphoblast	NCI-BL2122	CRL-5967
Adenocarcinoma; scirrhous	mammary gland	Hs 742.T	CRL-7482*	skin	Hs 742.Sk	CRL-7481*
Carcinoma	mammary gland	Hs 605.T	CRL-7365*	skin	Hs 605.Sk	CRL-7364*
Carcinoma	mammary gland	Hs 606	CRL-7368*	skin	Hs 606.Sk	CRL-7367*
Carcinoma; basal cell	skin	TE 354.T	CRL-7762*	skin	TE 353.Sk	CRL-7761*
Carcinoma; classic small cell lung cancer	lung	NCI-H1672	CRL-5886	B lymphoblast	NCI-BL1672	CRL-5959
Carcinoma; ductal	lymph node metastasis; mammary gland primary	HCC1008	CRL-2320	B lymphoblast	HCC1007 BL	CRL-2319
Carcinoma; ductal	mammary gland	HCC1954	CRL-2338	B lymphoblast	HCC1954 BL	CRL-2339
Carcinoma; ductal	mammary gland	Hs 574.T	CRL-7345*	skin	Hs 574.Sk	CRL-7346*
Carcinoma; ductal	mammary gland	Hs 578T	HTB-126	mammary gland	Hs 578Bst	HTB-125
Carcinoma; neuroendocrine; non-small cell lung cancer	lymph node metastasis; lung primary	NCI-H1770	CRL-5893	B lymphoblast	NCI-BL1770	CRL-5960
Carcinoma; primary ductal	mammary gland	HCC38	CRL-2314	B lymphoblast	HCC38 BL	CRL-2346
Carcinoma; primary ductal	mammary gland	HCC1143	CRL-2321	B lymphoblast	HCC1143 BL	CRL-2362
Carcinoma; primary ductal	mammary gland	HCC1187	CRL-2322	B lymphoblast	HCC1187 BL	CRL-2323
Carcinoma; primary ductal	mammary gland	HCC1395	CRL-2324	B lymphoblast	HCC1395 BL	CRL-2325
Carcinoma; primary ductal	mammary gland	HCC1599	CRL-2331	B lymphoblast	HCC1599 BL	CRL-2332
Carcinoma; primary ductal	mammary gland	HCC1937	CRL-2336	B lymphoblast	HCC1937 BL	CRL-2337
Carcinoma; primary ductal	mammary gland	HCC2157	CRL-2340	B lymphoblast	HCC2157 BL	CRL-2341
Carcinoma; primary ductal	mammary gland	HCC2218	CRL-2343	B lymphoblast	HCC2218 BL	CRL-2363
Carcinoma; small cell lung cancer	bone marrow metastasis; lung primary	NCI-H2195	CRL-5931	B lymphoblast	NCI-BL2195	CRL-5956
Carcinoma; small cell lung cancer	bone marrow metastasis; lung primary	NCI-H2107	CRL-5983	B lymphoblast	NCI-BL2107	CRL-5966
Carcinoma; small cell lung cancer	bone marrow metastasis; lung primary	NCI-H209	HTB-172	B lymphoblast	NCI-BL209	CRL-5948
Carcinoma; small cell lung cancer	lymph node metastasis; lung primary	NCI-H1184	CRL-5858	B lymphoblast	NCI-BL1184	CRL-5949

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Tumor/Normal Matched Cell Line Pairs

Cancer Type	Tissue Source (Tumor)	Name	ATCC® No.	Tissue Source (Normal)	Name	ATCC® No.
Carcinoma; small cell lung cancer	pleural effusion metastasis; lung primary	NCI-H2171	CRL-5929	B lymphoblast	NCI-BL2171	CRL-5969
Carcinoma; small cell lung cancer	pleural effusion metastasis; lung primary	NCI-H128	HTB-120	B lymphoblast	NCI-BL128	CRL-5947
Carcinoma; transitional cell	ureter	Hs 789.T	CRL-7886*	skin	Hs 789.Sk	CRL-7518*
Melanoma	lung metastasis; skin primary	Hs 895.T	CRL-7637*	skin	Hs 895.Sk	CRL-7636*
Melanoma; malignant	skin	COLO 829	CRL-1974	B lymphoblast	COLO 829BL	CRL-1980
Mesothelioma	pleural effusion metastasis; pleura primary	NCI-H2052	CRL-5915	B lymphoblast	NCI-BL2052	CRL-5963
Osteofication; heterophilic	bone	Hs 820.T	CRL-7552*	skin	Hs 820.Sk	CRL-7551*
Osteoma; benign osteoid	bone	Hs 919.T	CRL-7672*	skin	TE 353.Sk	CRL-7761*
Osteosarcoma	bone	Hs 704.T	CRL-7444*	skin	Hs 704.Sk	CRL-7443*
Osteosarcoma	bone	Hs 707(A).T	CRL-7448*	skin, connective tissue; keloid	KEL FIB	CRL-1762
Osteosarcoma	bone	Hs 889.T	CRL-7626*	skin	Hs 889.Sk	CRL-7625*
Osteosarcoma	bone	Hs 890.T	CRL-7628*	skin	Hs 890.Sk	CRL-7627*
Osteosarcoma	lung metastasis; bone primary	Hs 860.T	CRL-7595*	skin	Hs 791.Sk	CRL-7519*
Osteosarcoma	lung metastasis; bone primary	Hs 888.T	CRL-7622*	lung	Hs888Lu	CCL-211
Periostitis; granuloma	bone	Hs 709.T	CRL-7453*	skin	Hs 709.Sk	CRL-7452*
Sarcoma; giant cell	bone	Hs 821.T	CRL-7554*	skin	Hs 821.Sk	CRL-7553*
Sarcoma; giant cell	vertebral column	Hs 814.T	CRL-7547*	skin	Hs 814.Sk	CRL-7546*
Sarcoma; pagetoid	skin	Hs 925.T	CRL-7677*	skin	Hs 925.Sk	CRL-7676*

Primary and Metastatic Cell Lines from the Same Individual

Primary Cell Line Disease	Source	Name	ATCC No.	Metastatic Cell Line Metastatic Site	Name	ATCC No.
Adenocarcinoma; colorectal	colon	SW480	CCL-228	lymph node	SW620	CCL-227
Adenocarcinoma; gastric	stomach	RF-1	CRL-1864	ascites	RF-48	CRL-1863
Melanoma	skin	WM-115	CRL-1675	skin	WM-266-4	CRL-1676
Melanoma	skin	Hs 688(A).T	CRL-7425*	lymph node	Hs 688(B).T	CRL-7426*

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Stem Cells

ATCC established the Stem Cell Center in the year 2000 to support researchers in the growing field of stem cells. Today the Center diligently maintains and distributes one of the largest stem cell collections available — approximately 70 cell lines, including embryonic and somatic stem cells, embryonal carcinoma cells as well as mouse and human feeder cell lines. For more information visit the ATCC Stem Cell Center web pages at stemcells.atcc.org.

Product name	Description	Uses	ATCC® No.
Human embryonic stem cells			
BG01V	Variant of human embryonic stem cell line BG01	BG01V is easier to grow than most human ES lines; ideal for start-up stem cell research, eligible for U.S. government and private funding.	SCRC-2002
Mouse embryonic stem cells			
ES-C57BL/6	Strain C57BL/6; wild type cell line derived from inbred C57B/6	Germline-competent; complete genome sequenced and annotated; use with feeder cells C57BL/6 for genomic background consistency	SCRC-1002
ES-D3 GL	Strain 129S2/SvPas; wild type cell line derived from 129 sub-strain	Germline-competent	SCRC-1003
J1	Strain 129S4/Jae; wild type cell line derived from 129 sub-strain	Germline-competent	SCRC-1010
R1	Strain 129X1 x 129S1; wild type cell line derived from 129 sub-strain	Germline-competent	SCRC-1011
RW.4	Strain 129X1 / SvJ; wild type cell line derived from 129 sub-strain	Germline-competent	SCRC-1018
R1/E	Strain 129X1 x 129S1; wild type cell line; sub-clone of R1 line	Germline-competent	SCRC-1036
7AC5/EYFP	Strain 129X1 x 129S1; modified R1 line; constitutive YFP expression; puromycin-resistant	Germline-competent; recommended for gene targeting and transgenics	SCRC-1033
AINV15	Strain 129P2/OlaHsd; rtTA and HPRT cell line for targeting of plox constructs	Modified in vitro line; recommended for gene targeting	SCRC-1029
G-Olig2	Strain 129X1/SvJ; lineage-specific GFP expression	Modified in vitro line; useful for differentiation studies	SCRC-1037
CE-1	Strain 129S2/SvPas; cassette exchange for double lox targeting; hygromycin-resistant	Modified in vitro line; useful for gene targeting; good for selection of transfected cells	SCRC-1038
CE-3	Strain 129S2/SvPas; cassette exchange for double lox targeting; puromycin-resistant ; constitutive GFP expression	Modified in vitro line; useful for gene targeting studies; good for selection of transfected cells	SCRC-1039
ES-D3	Strain 129S4/Jae; pluripotent	In vitro line	CRL-1934

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Stem Cells

Product name	Description	Uses	ATCC® No.
Human embryonal carcinoma (EC) cells			
NTERA-2	Pluripotent line derived from a xenograft tumor of Tera-2	Commonly-used reference standard for human ESC markers*; used routinely at ATCC	CRL-1973
NCCIT	Teratocarcinoma; nullipotent; pluripotent	Use as positive or negative controls for ESC markers depending on assay	CRL-2073
Tera-1	Teratocarcinoma; nullipotent; pluripotent	Use as positive or negative controls for ESC markers depending on assay	HTB-105
Tera-2	Teratocarcinoma; nullipotent; pluripotent	Use as positive or negative controls for ESC markers depending on assay	HTB-106
Mouse embryonal carcinoma (EC) cells			
F9	Strain 129; testicular teratoma; pluripotent	Useful for endoderm differentiation studies	CRL-1720
NULLI-SCC1	Strain 129; teratocarcinoma; nullipotent control	Line does not differentiate; use as nullipotent control	CRL-1566
NFPE	Strain BALB/c; derived from NF-1 EC line	Useful for endoderm differentiation studies	CRL-2069
P19	Strain C3H/He; teratocarcinoma; pluripotent	Useful for neuronal (and possibly muscle) differentiation studies	CRL-1825
Mouse progenitor cells			
SFME	Strain BALB/c; neural stem cells	Use for lineage-specific differentiation studies	CRL-9392
EML Cell line, clone 1	Strain BDFI; bone marrow; lympho-hematopoietic progenitor cell line	Use for lineage-specific differentiation studies	CRL-11691
D1 ORL UVA	Strain BALB/c; bone marrow; multipotent stromal precursor	Use for lineage-specific differentiation studies	CRL-12424
Mouse Fibroblasts			
MEF (CF-1) IRR	Strain CF-1; CF-1 embryonic fibroblasts, irradiated	Outbred, hardier line: supports mouse and human ESC cultures	SCRC-1040.1
MEF (CF-1) MITC	Strain CF-1; CF-1 embryonic fibroblasts, mitomycin-C treated	Outbred, hardier line: supports mouse and human ESC cultures	SCRC-1040.2
MEF (CF-1)	Strain CF-1; CF-1 embryonic fibroblasts	Use to grow feeder cells for human and mouse ESC cultures	SCRC-1040
MEF (C57BL/6) IRR	Strain C57BL/6; C57BL/6 embryonic fibroblasts, irradiated	Supports mouse ESC cultures; ideal for use with SCRC-1002	SCRC-1008.1
MEF (C57BL/6) MITC	Strain C57BL/6; C57BL/6 embryonic fibroblasts, mitomycin-C treated	Supports mouse ESC cultures; ideal for use with SCRC-1002	SCRC-1008.2
MEF (C57BL/6)	Strain C57BL/6; C57BL/6 embryonic fibroblasts	Use to grow feeder cells for mouse ESC cultures; ideal for use with SCRC-1002	SCRC-1008
MEF (DR4) IRR	Strain DR4; DR4 embryonic fibroblasts, irradiated; resistant to commonly used concentrations of puromycin, hygromycin, G418, and 6-thioguanine	Supports mouse ESC cultures; good for antibiotic selection of transfected ESCs	SCRC-1045.1
MEF (DR4) MITC	Strain DR4; DR4 embryonic fibroblasts, mitomycin-C treated; resistant to commonly used concentrations of puromycin, hygromycin, G418, and 6-thioguanine	Supports mouse ESC cultures: good for antibiotic selection of transfected ESCs	SCRC-1045.2
MEF (DR4)	Strain DR4; DR4 embryonic fibroblasts;resistant to commonly used concentrations of puromycin, hygromycin, G418, and 6-thioguanine	Use to grow feeder cells for gene targeting with mouse ESC culture; good for antibiotic selection of transfected ESCs	SCRC-1045

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Stem Cells

Product name	Description	Uses	ATCC® No.
MEF (ICR) IRR	Strain ICR; ICR embryonic fibroblasts, irradiated	Supports mouse and some human ESC culture	SCRC-1046.1
MEF (ICR) MITC	Strain ICR; ICR embryonic fibroblasts, mitomycin-C treated	Supports mouse and some human ESC culture	SCRC-1046.2
MEF (ICR)	Strain ICR; ICR embryonic fibroblasts	Use to grow feeder cells for mouse and some human ESC culture	SCRC-1046
STO	Strain SIM; embryonic fibroblast-derived cell line	Use to grow feeder cells for mouse ESC culture	CRL-1503
STO IRR	Strain SIM; STO embryonic fibroblasts, irradiated	Supports mouse ESC culture	56-X
Human Fibroblasts			
HFF-1 IRR	HFF-1 foreskin fibroblasts, irradiated	Supports human ESC culture	SCRC-1041.1
HFF-1 MITC	HFF-1 foreskin fibroblasts, mitomycin-C treated	Supports human ESC culture	SCRC-1041.2
HFF-1	HFF-1 foreskin fibroblasts, newborn	Use to grow feeder cells for human ESC culture	SCRC-1041
HFF-2 MITC	HFF-2 foreskin fibroblasts, mitomycin-C treated	Supports human ESC culture	SCRC-1042.2
HFF-2	HFF-2 foreskin fibroblasts	Use to grow feeder cells for human ESC culture	SCRC-1042
Support Cells			
3T3-Swiss albino	Strain: Swiss albino; mouse embryonic fibroblast-derived cell line	Use for hematopoietic cell culture	CRL-92
3T3-Swiss albino, IRR	Strain: Swiss albino; mouse 3T3-Swiss albino embryonic fibroblasts, irradiated	Use for hematopoietic cell culture	48-X
OP9	Strain: (C57Bl/6 x C3H); mouse bone marrow; stroma	Use for hematopoietic cell culture	CRL-2749
C166	Strain: (NMRI/GSF x CD-1); mouse yolk sac; endothelial	Use for hematopoietic cell culture	CRL-2581
C166-GFP	Strain: (NMRI/GSF x CD-1); mouse yolk sac; endothelial; GFP expressing	Use for hematopoietic cell culture	CRL-2583
AFT024	Mouse embryonic liver	Use for hematopoietic cell culture	SCRC-1007
AFT024 IRR	AFT024 irradiated	Use for hematopoietic cell culture	SCRC-1007.1

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Cell Lines Used as Tools and Models

Cell lines have many applications as phenotypic or process models, tools for production or expression, and dozens of other utilities. This index represents a sample of published applications for ATCC cell lines. References can be found in each cell line description in the cell biology section of the ATCC online catalog.

Application	Species	Name	ATCC® No.
Transfected and Expressing			
CTLA4Ig fusion protein	hamster, Chinese	CTLA4 Ig-24	CRL-10762†
Granulocyte colony stimulating factor (G-CSF)	chicken	Con A-C1-VICK	CRL-12135†
Granulocyte colony stimulating factor (G-CSF)	chicken	ConA-B1-VICK	CRL-12357†
HER2/*neu*	mouse	B104-1-1	CRL-1887
HER2/*neu*	mouse	DHFR-G8	CRL-1915
Human 5HT1D receptor	mouse	Ltk-11	CRL-10422†
Human 5HT2 receptor	mouse	L-NGC-5HT2	CRL-10287†
Human adrenergic alpha1B receptor	mouse	L-α-1b	CRL-11139†
Human CD36	hamster, Chinese	CHO-CD36	CRL-2092
Human colony stimulating factor (M-CSF)	hamster, Chinese	5/9 m α3-18	CRL-10154†
Human CR1	hamster, Chinese	35.6	CRL-10052†
Human dopamine D2 receptor	mouse	A9 L hD2 S.C. 18	CRL-10225†
Human erythropoietin	hamster, Syrian golden	BHK21-pcDNA3.1-HC	CRL-13001†
Human gamma interferon	hamster, Chinese	HIIF-D	CRL-8200†
Human glycosylation inhibiting factor (GIF)	human/human	31E9	HB-11052†
Human ICAM-1	hamster, Chinese	CHO-ICAM-1	CRL-2093
Human pluripotent hematopoietic colony-stimulating factor (p-CSF)	human	1A6	CRL-2742
Human tissue plasminogen activator (t-PA)	hamster, Chinese	CHO 1-15$_{500}$	CRL-9606†
IgE binding factor (lymphoma)	rat (T cell)/mouse	23B6	HB-8521†
Mouse c-*myc* protein	hamster, Chinese	DUKX B1	CRL-9010†
Neuroleukin	hamster, Chinese	CHO-1C6	CRL-1793
P element transposase	*Drosophila*	L-2/M δ 2-3	CRL-10191†
p97 melanoma associated antigen	mouse	MTKP 97-12	CRL-8985†
Rat GABAA receptor	human	WSS-1	CRL-2029
Rat m1 muscarinic acetylcholine receptor	hamster, Chinese	M1WT2	CRL-1984
Rat m1 muscarinic acetylcholine receptor	hamster, Chinese	M1WT3	CRL-1985
Rat m1 muscarinic acetylcholine receptor	hamster, Chinese	M1WT5	CRL-1986
Rat m3 muscarinic acetylcholine receptor	hamster, Chinese	M3WT4	CRL-1981
Rat m3 muscarinic acetylcholine receptor	hamster, Chinese	M3WT5	CRL-1982
Rat m3 muscarinic acetylcholine receptor	hamster, Chinese	M3WT8	CRL-1983
Soluble CHE-Fc	human	293/CHE-Fc	CRL-2368
Soluble suppression factor (SSF)	human (T cell)/human (T cell leukemia)	HM2	HB-8587†
Wnt-3A conditioned medium	mouse	L Wnt-3A	CRL-2647
Control for L Wnt-3A cells	mouse	L Cells	CRL-2648
Retroviral Packaging Lines			
Amphotropic retroviral packaging line	dog	DAN	CRL-2130
Amphotropic retroviral packaging line	human	Bing	CRL-11554†
Amphotropic retroviral packaging line	human	2A	CRL-12013†
Amphotropic retroviral packaging line	human	ProPakA.6	CRL-12006†
Amphotropic retroviral packaging line	human	ProPak-A.52 Clone #52	CRL-12479†
Amphotropic retroviral packaging line	mouse	PT67	CRL-12284†
Amphotropic retroviral packaging line	mouse	PA317 LXSN 16E6E7	CRL-2203
Amphotropic retroviral packaging line	mouse	PA317 LXSN 16E6	CRL-2204

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Cell Lines Used as Tools and Models

Application	Species	Name	ATCC® No.
Amphotropic retroviral packaging line	mouse	PA317 LXSN 16E7	CRL-2205
Amphotropic retroviral packaging line	mouse	PA317 LXSN 6E6	CRL-2206
Amphotropic retroviral packaging line	mouse	PA317 LXSN 6E7	CRL-2207
Amphotropic retroviral packaging line	mouse	PA317	CRL-9078†
Amphotropic retroviral packaging line	mouse	GP+envAM-12	CRL-9641†
Ecotropic retroviral packaging line	human	BOSC 23	CRL-11270†
Ecotropic retroviral packaging line	mouse	GP+E-86	CRL-9642†
MoMuLV retroviral packaging line	mouse	Wgd5	CRL-1817
Polytropic retroviral packaging cell line	human	HP	CRL-12012†
Retroviral packaging line	dog	DSDh	CRL-2131
Retroviral packaging line	mouse	PG13	CRL-10686†
Xenotropic retroviral packaging cell line	human	HX	CRL-12011†
Xenotropic retroviral packaging line	human	ProPak-X.36	CRL-12007†
Recombinant Retroviral Expression			
Amphotropic control retrovirus; g418 resistant	mouse	PA317 LXSN	CRL-2202
Retrovirus containing adenovirus 12S E1A gene	mouse	Psi2 12S6	CRL-1808
Retrovirus containing adenovirus 13S E1A gene	mouse	Psi2 13s1	CRL-1809
Retrovirus containing beta galactosidase gene	mouse	CRE BAG 2	CRL-1858
Retrovirus containing beta galactosidase gene	mouse	Ψ 2 BAG α	CRL-9560†
Retrovirus containing human alkaline phosphatase gene	mouse	ψ 2 DAP	CRL-1949
Retrovirus containing human cyclin E-L gene	mouse	PA317 cyclin E-L	CRL-2187
Retrovirus containing human cyclin E-S gene	mouse	PA317 cyclin E-S	CRL-2188
Retrovirus containing vHa-*ras* oncogene	mouse	Raszip 6	CRL-1917
Retrovirus with a neomycin resistant gene	mouse	PG13/LN c8	CRL-10685†
SNV helper virus	dog	DSN	CRL-9939†
Genetic Defects			
Defective in nucleotide excision repair	hamster, Chinese	UV41	CRL-1860
Defective in nucleotide excision repair	hamster, Chinese	UV20	CRL-1862
Defective in nucleotide excision repair	hamster, Chinese	UV5	CRL-1865
Defective in nucleotide excision repair	hamster, Chinese	UV24	CRL-1866
Defective in nucleotide excision repair	hamster, Chinese	UV135	CRL-1867
Defective in single strand break repair	hamster, Chinese	EM9	CRL-1861
Deficient for Src, Yes, and Fyn; immortalized with SV40 large T antigen	mouse	SYF	CRL-2459
Deficient for Yes and Fyn; immortalized with SV40 large T antigen	mouse	Src++	CRL-2497
Deficient for Yes and Fyn; immortalized with SV40 large T antigen	mouse	SYF + c-Src	CRL-2498
Deficient in dihydrofolate reductase	hamster, Chinese	CHO/dhFr$^-$	CRL-9096†
Galactosyltransferase I deficient	hamster, Chinese	pgsB-618	CRL-2241
Galactosyltransferase I deficient	hamster, Chinese	pgsB-650	CRL-2243
Heparin sulfate deficient	hamster, Chinese	pgsD-677	CRL-2244
Heparin sulfate N-sulfotransferase deficient	hamster, Chinese	pgsE-606	CRL-2246
Ku autoantigen mutant	hamster, Chinese	xrs5	CRL-2348
Lacks GlcNAc glycosyl transferase function	hamster, Chinese	Lec1	CRL-1735
Methotrexate resistant	hamster, Chinese	LA 3-5	CRL-10101†
Proline auxotroph	hamster, Chinese	Pro$^-$5	CRL-1781
Reduced transport of CMP-sialic acid into Golgi	hamster, Chinese	Lec2	CRL-1736
Reduced transport of UDP-galactose into Golgi	hamster, Chinese	Lec8	CRL-1737
Sulfate transporter deficient	hamster, Chinese	pgsC-605	CRL-2245
Xylosyltransferase I deficient	hamster, Chinese	pgsA-745	CRL-2242
Signal Transduction Model Systems			
Apoptosis			
Brain; glioblastoma; p53+, p16-, p14ARF-	human	LN-18	CRL-2610
Brain; glioblastoma; p53+, p16-, p14ARF-	human	LN-229	CRL-2611
Colon; carcinoma; negligible p53 expression	human	RKO-E6	CRL-2578

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Cell Lines Used as Tools and Models

Application	Species	Name	ATCC® No.
Colon; carcinoma; overexpression of GADD4	human	RKO-AS45-1	CRL-2579
Colon; carcinoma; control for RKO-E6 and RKO-AS45-1 cell lines	human	RKO	CRL-2577
Embryo; null for cytochrome c	mouse	Cyt c-/-	CRL-2613
Pituitary; nonfunctioning plurihormonal adenoma	human	HP75	CRL-2506
T lymphocyte; caspase-8 mutant	human	I 9.2	CRL-2571
T lymphocyte; FADD mutant	human	I 2.1	CRL-2572
T lymphocyte; control for I 9.2 and I 2.1	human	A3	CRL-2570
IL-3 signaling pathway			
Bone marrow; erythroblast	human	TF-1	CRL-2003
Bone marrow; erythroblast; control cell line for TF-1	human	TF-1a	CRL-2451
Integrin signaling			
Embryo; null for both FAK and p53	mouse	FAK-/-	CRL-2644
Embryo; positive for FAK but null for p53	mouse	FAK+/+	CRL-2645
T cell receptor			
T lymphocyte; PLC-gamma1 negative	human	J.γ1	CRL-2678
T lymphocyte; transfected with PLC-gamma1 expression vector; control for J.γ1 cells	human	J.γ1.WT	CRL-2679
T lymphocyte; transfected with ZAP-70 expression vector; control for P116 cells	human	P116.cl39	CRL-2677
T lymphocyte; ZAP-70 negative; model for T cell receptor signaling	human	P116	CRL-2676
Transfection Hosts			
Kidney; highly transfective	human	293T/17	CRL-11268†
Liver; hepatocellular carcinoma; transfected with a CYP7 minigene/luciferase construct	human	HEP G2/2.2.1	CRL-11997†
Tumor, adenovirus 12 induced; transfection host; exogenous gene expression	hamster, Syrian golden	MCB3901	CRL-9595†
Assay Systems			
Androgen agonist/antagonist; luciferase responsive	human	MDA-kb2	CRL-2713
Carcinogens and mutagens	human	MCL-5	CRL-10575†
Carcinogens and mutagens	human	AHH-1	CRL-8146†
Drug resistance in ovarian cancer	human	NIH:OVCAR-3	HTB-161
Models			
Low density lipoprotein receptor-related protein (LRP) model			
Embryo; SV40 transformed	mouse	MEF-1	CRL-2214
Embryo; LRP deficient	mouse	PEA 10	CRL-2215
Embryo; LRP deficient	mouse	PEA 13	CRL-2216
Microvascular endothelial cell model			
Hemangioendothelioma	mouse	EOMA	CRL-2586
Hemangioendothelioma; expresses GFP	mouse	EOMA-GFP	CRL-2587
Cre-Lox recombination model			
Embryo; SV40 large T antigen transfected	mouse	MB19tsA, clone 2B2	CRL-2308
Control for MBI9tsA, clone 2B2	mouse	MB16tsA, clone 1B5	CRL-2307
Metastatic tumor model			
Mammary gland tumor	mouse	4T1	CRL-2539
DNA damage recognition and repair			
Brain, glial cell; malignant glioblastoma	human	M059K	CRL-2365
Brain, glial cell; malignant glioblastoma	human	M059J	CRL-2366
In vivo glioma models			
Brain; gliosarcoma; expresses beta galactosidase	rat	C6/LacZ	CRL-2199
Brain; gliosarcoma; expresses beta galactosidase	rat	9L/lacZ	CRL-2200
Brain; gliosarcoma; expresses beta galactosidase	rat	C6/lacZ7	CRL-2303
Brain; undifferentiated malignant glioma	rat; fetal	F98	CRL-2397
Brain; undifferentiated malignant glioma	rat; fetal	RG2	CRL-2433
Immunotherapy protocols			
Ascites; malignant fibrosarcoma; dibenzanthracene	mouse	SaI	CRL-2543

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Cell Lines Used as Tools and Models

Application	Species	Name	ATCC® No.
induced			
Colon; carcinoma	mouse	CT26.WT	CRL-2638
Colon; carcinoma	mouse	CT26.CL25	CRL-2639
Feeder Layer Cell Lines			
Bone marrow; stroma; HPV-16 E6/E7 transformed	human	HS-5	CRL-11882†
Mammary gland tumor	rat	LA7	CRL-2283
Embryo	mouse	3T3-Swiss albino	CCL-92
Lung	human	MRC-5	CCL-171
Embryo	mouse	STO	CRL-1503
Hybridoma Fusion Partners			
B cell	human	36	CRL-8193†
B cell	human	A6	CRL-8192†
B cell	human	F3B6	HB-8785†
B cell	human	GK-5	CRL-1834
B cell	human	HuNS1	CRL-8644†
B cell	human	K6H6/B5	CRL-1823
B cell	human	KR-12	CRL-8658†
B cell	human	LTR228	HB-8502†
B cell	human	MC/CAR	CRL-8083†
B cell	human	MC/CAR-Z2	CRL-8147†
B cell	human	SHM-D33	CRL-1668
B cell	human	SKO-007	CRL-8033-1†
B cell	human	SKO-007 [clone J3]	CRL-8033-2†
B cell	human	WI-L2-729HF2	CRL-8062†
B cell	human	WIL2-NS	CRL-8155†
B cell	human	WIL2-S	CRL-8885†
B cell	mouse	45.6.TG1.7	CRL-1608
B cell	mouse	FO	CRL-1646
B cell	mouse	FOX-NY	CRL-1732
B cell	mouse	P3/NSI/1-Ag4-1 (NS-1)	TIB-18
B cell	mouse	P3X63Ag8	TIB-9
B cell	mouse	P3X63Ag8.653	CRL-1580
B cell	mouse	P3X63Ag8U.1	CRL-1597
B cell	mouse	RPC5.4	TIB-12
B cell	mouse	S194/5.XXO.BU.1	TIB-20
B cell	mouse	Sp2/01-Ag	CRL-8006†
B cell	mouse	Sp2/0-Ag14	CRL-1581
B cell	mouse	Sp2/0-Ag14	CRL-8287†
B cell	mouse	Sp2/mIL-6	CRL-2016
B cell	rat	Y3-Ag 1.2.3	CRL-1631
B cell	rat	YB2/0	CRL-1662
T cell	human	CEM-CM3	TIB-195
T cell	mouse	AKR1.G.1.OVA^{R}.1.26	TIB-232
T cell	mouse	BW5147.G.1.4	TIB-48
T cell	mouse	BW5147.G.1.4.OUA^{R}.1	CRL-1588
T cell	mouse	EL4.BU	TIB-40
T cell	rat	C58(NT)D.1.G.OVA^{R}.1	TIB-236
Factor Assay Systems			
Ciliary neurotrophic factor (CNTF)	human	TF-1.CN5a.1	CRL-2512
Colony stimulating factor (CSF)	human	KG-1	CCL-246
Control for KG-1, does not respond to CSF	human	KG-1a	CCL-246.1
Fibroblast growth factor (FGF)	bovine	FBHE	CRL-1395
Fibroblast growth factor (FGF)	mouse	SR-4987	CRL-2028
Human bone morphogenetic protein-2 (rhBMP-2)	mouse	W-20-17	CRL-2623
IL-1	human	A375.S2	CRL-1872
IL-1	mouse	D10.G4.1	TIB-224
IL-2 and IL-4 (BSF-1)	mouse	HT-2 clone A5E	CRL-1841
IL3 , G-CSF , GM-CSF	human	TF-1	CRL-2003

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Cell Lines Used as Tools and Models

Species	Starting Phenotye	Ending Phenotype	Tissue/Disease	Name	ATCC® No.
Differentiating					
Bone					
mouse	preosteoblast	osteoblast	bone, calvaria	MC3T3-E1 Subclone 4	CRL-2593
mouse	preosteoblast	osteoblast	bone, calvaria	MC3T3-E1 Subclone 14	CRL-2594
mouse	preosteoblast	control for MC3T3-E1 Subclones 4 and 14	bone, calvaria	MC3T3-E1 Subclone 24	CRL-2595
mouse	preosteoblast	control for MC3T3-E1 Subclones 4 and 14	bone, calvaria	MC3T3-E1 Subclone 30	CRL-2596
human	preosteoblast; SV40 large T antigen transfected	osteoblast	bone	hFOB 1.19	CRL-11372†
mouse	stromal precursor; multipotent	osteocytes, chondrocytes, and adipocytes	bone marrow	D1 ORL UVA	CRL-12424†
mouse	osteoblast	adipocyte	bone marrow	7F2	CRL-12557†
Breast					
human	malignant breast tumor cells	mature breast cell phenotype	adenocarcinoma; mammary gland	AU565	CRL-2351
Endothelial					
mouse	endothelial	endothelial cell differentiation	yolk sac	C166	CRL-2581
mouse	endothelial	endothelial cell differentiation	yolk sac	C166-GFP	CRL-2583
mouse	testicular teratoma	parietal endoderm	embryonal carcinoma	F9	CRL-1720
Epithelial					
human	bronchus; viral immortalized	squamous differentiation	lung	BEAS-2B	CRL-9609†
human	colon epithelium	enterocytic differentiation; expresses etinoic acid binding proteins I and II; keratin positive	colon	Caco-2	HTB-37
mouse	hepatocyte, tsSV-40 immortalized	various phenotypes; induction of liver transcription factor; increase in albumin mRNA	liver	H2.35	CRL-1995
rat	lung epithelium	squamous epithelium (nonkeratinized)	lung	RL-65	CRL-10354†
Hematopoietic					
human	promyelocyte	granulocyte, monocyte, or macrophage	acute promyelocytic leukemia	HL-60	CCL-240
human	histiocyte/monocyte	macrophage	histiocytic lymphoma	U-937	CRL-1593.2
human	erythroblast	macrophage-like	erythroleukemia, bone marrow	TF-1	CRL-2003
human	monoblast	macrophage-like	peripheral blood	GDM-1	CRL-2627
human	erythroblast	macrophage-like	bone marrow; erythro-leukemia	HEL 92.1.7	TIB-180
human	monocyte	macrophage	acute monocytic leukemia	THP-1	TIB-202
mouse	erythroblast	hemoglobin synthesis, erythroid differentiation	spleen, leukemia	BB88	TIB-55
mouse	erythroblast	hemoglobin synthesis, erythroid differentiation	spleen, leukemia	D1B	TIB-56
mouse	neutrophil progenitor	neutrophil	bone marrow Clone 2.1	MPRO Cell Line,	CRL-11422†
mouse	lymphohematopoietic stem cell	B-lymphocyte, erythrocyte, neutrophil, macrophage, mast cell, megakaryocyte	bone marrow	EML Cell Line, Clone 1	CRL-11691†
Muscle					
mouse	fibroblast	myoblast	embryo	C3H/10T1/2, Clone 8	CCL-226
Neural					
human	fibroblast	neurons	embryonal carcinoma	NTERA-2 cl.D1 (NT2/D1)	CRL-1973
mouse	teratocarcinoma	neural and glial-like cells	embryonal carcinoma	P19	CRL-1825
mouse	fibroblast	astrocyte	embryo	Swiss SFME	CRL-9391†
mouse	neural stem cell	astrocyte	embryo	BALB SFME	CRL-9392†
rat	adrenal gland	neuronal phenotype	pheochromocytoma	PC-12	CRL-1721

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Neurobiology

ATCC cells for neurobiology include tumor and normal cells (from human and other species) and hybridomas whose monoclonal antibodies target neural proteins. For more information on a cell line, see the main list starting on page 30 or use the catalogue number to find the entry in the cell biology section of the online catalog.

Species	Tissue Source	Cell Type	Appearance	Name	ATCC® No.
Glioma cells					
human	brain	astroglia	fibroblast	SVG p12	CRL-8621*
human	brain; astrocytoma		astrocytic	CCF-STTG1	CRL-1718
human	brain; astrocytoma		fibroblast	SW 1088	HTB-12
human	brain; astrocytoma		fibroblast	SW 1783	HTB-13
human	brain; cerebrum; right temporal lobe; glioblastoma; glioma		epithelial	LN-18	CRL-2610
human	brain; glioblastoma		glial	LNZTA3WT4	CRL-11543†
human	brain; glioblastoma		glial	LNZTA3WT11	CRL-11544†
human	brain; glioblastoma		epithelial	A172	CRL-1620
human	brain; glioblastoma	glial cell	fibroblast	DBTRG-05MG	CRL-2020
human	brain; glioblastoma		polygonal	U-138 MG	HTB-16
human	brain; glioblastoma multiforme		fibroblast (glial)	T98G	CRL-1690
human	brain; glioblastoma; astrocytoma		epithelial	U-87 MG	HTB-14
human	brain; glioblastoma; astrocytoma		mixed	U-118 MG	HTB-15
human	brain; glioma		fibroblast	Hs 683	HTB-138
human	brain; malignant glioblastoma; glioma	glial cell	fibroblast	M059K	CRL-2365
human	brain; malignant glioblastoma; glioma	glial cell	fibroblast	M059J	CRL-2366
human	brain; neuroglioma		epithelial	H4	HTB-148
human	brain, right frontal parietal-occipital cortex; glioblastoma		epithelial	LN-229	CRL-2611
Medulloblastoma-derived cells					
human	brain, cerebellum; medulloblastoma		spheroid	D341 Med	HTB-187
human	brain, cerebellum; medulloblastoma; desmoplastic cerebellar		polygonal	Daoy	HTB-186
human	brain, cerebellum; medulloblastoma; metastatic sites: ascites and peritoneum		epithelial	D283 Med	HTB-185
Tumor cells metastatic to brain					
human	lung; carcinoma; classic small cell lung cancer			NCI-H250	CRL-5828
human	lung; large cell carcinoma			NCI-H1915	CRL-5904
human	mammary gland; adenocarcinoma		epithelial	MDA-MB-361	HTB-27
human	prostate; carcinoma		epithelial	DU 145	HTB-81
Neuroendocrine tissue					
human	lung; carcinoma; non-small cell lung cancer	neuroendocrine		NCI-H1770	CRL-5893
human	lung; extrapulmonary small cell carcinoma; metastatic site: lymph node	neuroendocrine	epithelial	NCI-H660	CRL-5813
human	lung; large cell carcinoma; metastatic site: lymph node	neuroendocrine	epithelial	NCI-H1299	CRL-5803

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Neurobiology

Species	Tissue Source	Cell Type	Appearance	Name	ATCC® No.
human	lung; large cell carcinoma; metastatic site: lymph node	neuroendocrine	epithelial	NCI-H1155	CRL-5818
human	lung; large cell carcinoma; metastatic site: lymph node	neuroendocrine		NCI-H2106	CRL-5923
human	lung; large cell carcinoma; non-small cell lung cancer	neuroendocrine	epithelial	NCI-H810	CRL-5816
human	neuroectodermal tumor; retroperitoneal embryonal tumor		epithelial	SK-PN-DW	CRL-2139
human	testis; malignant carcinoma; pluripotent embryonal; metastatic site: lung	neuroendocrine	fibroblast	NTERA-2 cl.D1	CRL-1973
Nontumor neuronal-like cells					
human	brain	cortical neuron	neuronal	HCN-1A	CRL-10442†
human	brain	cortical neuron	neuronal	HCN-2	CRL-10742†
Retinoblastoma-derived cells					
human	eye (retina); retinoblastoma		lymphoblast	WERI-Rb-1	HTB-169
human	eye (retina); retinoblastoma		epithelial	Y79	HTB-18
Tumor-derived neuronal-like cells					
human	brain, cerebellum; malignant primitive neuroectodermal tumor		fibroblast	PFSK-1	CRL-2060
human	brain; embryonal neuroblastoma; metastatic site: bone marrow	neuroblast	epithelial	SK-N-DZ	CRL-2149
human	brain; embryonal neuroblastoma; metastatic site: bone marrow	neuroblast	epithelial	SK-N-AS	CRL-2137
human	brain; embryonal neuroblastoma; metastatic site: bone marrow	neuroblast	epithelial	SK-N-FI	CRL-2142
human	brain; neuroblastoma	neuroblast	fibroblast; neuroblast	IMR-32	CCL-127
human	brain; neuroblastoma		neuroblast	CHP-212	CRL-2273
human	brain; neuroblastoma; metastatic site: bone marrow		epithelial	SH-SY5Y	CRL-2266
human	brain; neuroblastoma; metastatic site: bone marrow		neuroblast	BE(2)-M17	CRL-2267
human	brain; neuroblastoma; metastatic site: bone marrow		neuroblast	BE(2)-C	CRL-2268
human	brain; neuroblastoma; metastatic site: bone marrow		neuroblast	SK-N-BE(2)	CRL-2271
human	brain; neuroblastoma; metastatic site: bone marrow		epithelial	SK-N-SH	HTB-11
human	brain; neuroepithelioma; metastatic site: supraorbital area		fibroblast	MC-IXC	CRL-2270
human	brain; neuroepithelioma; metastatic site: supraorbital area		epithelial	SK-N-MC	HTB-10
Nonhuman Cells					
cat	brain	glial, astrocyte	glial, astrocyte	PG-4 (S^+L^-)	CRL-2032
cat	brain	glial, astrocyte	glial, astrocyte	G355-5	CRL-2033
crayfish	brain; cerebral ganglion	dendritic	dendritic	OLGA-PH-J/92	CRL-2576
ferret	brain		fibroblast	Mpf	CRL-1656
mouse	brain	neuron	round	CATH.a	CRL-11179†
mouse	brain	smooth muscle-like tumor	fibroblast	BC3H1	CRL-1443
mouse	brain	microglia; macrophage	macrophage	EOC 2	CRL-2467
mouse	brain	microglia; macrophage	macrophage	EOC 13.31	CRL-2468
mouse	brain	microglia; macrophage	macrophage	EOC 20	CRL-2469
mouse	brain, cerebellum	astrocyte, type III phenotype	neuronal	C8-D30	CRL-2534
mouse	brain, cerebellum	astrocyte, type II phenotype	neuronal	C8-S	CRL-2535

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Neurobiology

Species	Tissue Source	Cell Type	Appearance	Name	ATCC® No.
mouse	brain, cerebellum	microglial	neuronal	C8-B4	CRL-2540
mouse	brain, cerebellum	astrocyte, type I phenotype	neuronal	C8-D1A	CRL-2541
mouse	brain, cerebral cortex; endothelioma	endothelial	endothelial	bEnd.3	CRL-2299
mouse	brain; neuroblastoma	neuroblast	neuronal and amoeboid	Neuro-2a	CCL-131
mouse	brain; neuroblastoma	neuroblast	neuroblast with elongated processes	NB41A3	CCL-147
mouse	brain; neuroblastoma	neuroblast	fibroblast	N1E-115	CRL-2263
mouse/rat	brain; neuroblastoma/glioma hybrid	glial cell; neuron	flat; round	NG108-15	HB-12317†
quail, Japanese	neuroretina	neuronal	neuronal	QNR/D	CRL-2532
quail, Japanese	neuroretina	astroglial	astroglial	QNR/K2	CRL-2533
rat	adrenal gland; pheochromocytoma	polygonal	polygonal	PC-12	CRL-1721
rat	brain; cortex	astrocyte, type 1 phenotype	fibroblast	CTX TNA2	CRL-2006
rat	brain; diencephalon	astrocyte, type 1 phenotype	fibroblast	DI TNC_1	CRL-2005
rat	brain; glioma	glial cell	fibroblast	C6	CCL-107
rat	brain; gliosarcoma	glial cell	fibroblast	C6/LacZ	CRL-2199
rat	brain; gliosarcoma	glial cell	fibroblast	9L/lacZ	CRL-2200
rat	brain; gliosarcoma	glial cell	fibroblast	C6/lacZ7	CRL-2303
rat	brain; undifferentiated malignant glioma		glial	F98	CRL-2397
rat	brain; undifferentiated malignant glioma		glial	RG2	CRL-2433
rat	hippocampus		fibroblast	H19-7/IGF-IR	CRL-2526
rat	jejunum, myenteric plexus	enteroglial	glial	EGC/PK060399 egfr	CRL-2690
sheep	brain, choroid plexus		fibroblast	SCP	CRL-1700
sheep	brain		fibroblast	OA1	CRL-6538

Hybridomas

Antigenic Specificity	B Cell/Myeloma	Isotype	Name	ATCC® No.
Acetylcholine receptor (AChR) alpha subunit	rat/mouse	IgG1	mAb35	TIB-175
Acetylcholine receptor (AChR) alpha subunit	rat/rat	IgG2a	mAb64	HB-8987†
Acetylcholine receptor (AChR) main immunogenic region of the alpha subunit	rat/mouse	IgG1	mAb 35	HB-8857†
Acetylcholine receptor, neuronal, chicken and rat	rat/mouse	IgG2a	mAb 270	HB-189
Astrocyte protein, human	mouse/mouse	IgM	J1-31	CRL-2253
Astrocytoma cell line, gp120 glycoprotein, human	mouse/mouse	IgG1	S5	HB-9255†
Astrocytoma cell line, gp90 glycoprotein, human	mouse/mouse	IgG2a	G253	HB-9706†
Astrocytoma cell line, Thy-1 antigen, human	mouse/mouse	IgG1	K117	HB-8553†
Clathrin (light chain, 36000 dalton), bovine brain	mouse/mouse	IgG1	CVC.1	TIB-135
Clathrin (light chain, 36000 dalton), bovine brain	mouse/mouse	IgG2a	CVC.7	TIB-137
Clathrin, bovine brain	mouse/mouse	IgM	CVC.4	TIB-138
Ganglioside associated with neuronal cells, endocrine cells, and T lymphocytes	mouse/mouse	IgM; kappa	3G5	CRL-1814
Neuroblastoma, human	mouse/mouse	IgM	PI 153/3	TIB-198
Medullary thymic epithelium, mouse	rat/mouse	IgM	MD2	HB-229
Nerve growth factor (NGF) receptor, primate	mouse/mouse	IgG1	200-3-G6-4	HB-8737†
Nicotinic acetylcholine receptor, *Torpedo californica*	mouse/mouse	IgG1	88B	CRL-1967
Oxytocin-neurophysin (NP-OT), rat	mouse/mouse	IgG2a; kappa	PS 67	CRL-1797
Oxytocin-neurophysin (NP-OT), rat	mouse/mouse	IgG2b; kappa	PS 60	CRL-1800
Oxytocin-neurophysin (NP-OT), rat	mouse/mouse	IgG2b; kappa	PS 38	CRL-1950
Rat neural antigen 2: astrocytes, ependymal cell	mouse/mouse	IgG2a	RAN-2	TIB-119
Vasopressin-neurophysin (NP-AVP), rat	mouse/mouse	IgG2b; kappa	PS 45	CRL-1798
Vasopressin-neurophysin (NP-AVP), rat	mouse/mouse	IgG2b; kappa	PS 41	CRL-1799

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.
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Genetic Variant Fibroblasts

The following list contains human skin fibroblast cell lines from individuals with genetic disorders and other disease states. In most cases the cell lines were developed at ATCC from skin biopsies. Skin fibroblast lines have a finite life expectancy and thus supplies may be limited. For more information on a cell line, see the main list starting on page 30 or use the catalogue number to find the entry in the cell biology section of the ATCC online catalog.

Condition	Name	ATCC® No.
Acanthocytosis	Hs 859.T	CRL-7594*
Aspartoacylase deficiency; possible Canavan disease; foreskin	Hs68	CRL-1635
Chronic dermatitis	Hs 483.T	CRL-7814*
Citrullinemia	citrullinemia	CCL-76
Cockayne syndrome	Tep Be	CRL-1336
Cri du Chat syndrome	C 211	CCL-123
Cri du Chat syndrome	Cri du Chat	CCL-90
Cystic fibrosis	CCD-186Sk	CRL-1563
Darier-White disease	Lei Cap	CRL-1098
DiGeorge syndrome	Hs 610.Sk	CRL-7372*
Down syndrome	Detroit 529	CCL-66
Down syndrome	Detroit 539	CCL-84
Down syndrome	Hs 52.Sk	CRL-7031*
Down syndrome; foreskin	Detroit 532	CCL-54
Ehlers-Danlos syndrome	Ron Har	CRL-1131
Ehlers-Danlos syndrome	Bi Fin	CRL-1219
Ehlers-Danlos syndrome	Mar Ton	CRL-1252
Ehlers-Danlos syndrome	Wo Fel	CRL-1273
Ehlers-Danlos syndrome	Ga Va	CRL-1394
Ehlers-Danlos syndrome (variant type)	Me Mon	CRL-1342
Ehlers-Danlos syndrome (variant type)	EB	CRL-1365
Ehlers-Danlos syndrome (variant type)	Da Hol	CRL-1379
Ehlers-Danlos syndrome (variant type)	Go Je	CRL-1381
Ehlers-Danlos syndrome, possible heterozygote	Em Ar	CRL-1168
Ehlers-Danlos syndrome, possible heterozygote	Gam Per	CRL-1326
Ehlers-Danlos syndrome, possible heterozygote	No Per	CRL-1327
Ehlers-Danlos syndrome, possible heterozygote	Jo Per	CRL-1332
Ehlers-Danlos syndrome, possible heterozygote	Gap Per	CRL-1335
Ehlers-Danlos syndrome, presumed heterozygote	Ar Ke-2	CRL-1324
Ehlers-Danlos syndrome, presumed heterozygote	Al Ke	CRL-1325
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Lo Ren	CRL-1130
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Mar Vin	CRL-1138
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Lu Vin	CRL-1144
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Bo Gin	CRL-1180
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Jay Sen	CRL-1215
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Pa Kel-1	CRL-1341
Ehlers-Danlos syndrome, type I (autosomal dominant type)	Pa Kel-2	CRL-1344
Ehlers-Danlos syndrome, type II	Ad Hot	CRL-1227
Ehlers-Danlos syndrome, type II	Ro Dow	CRL-1337
Ehlers-Danlos syndrome, type II (hemorrhagic type)	Ja Bos	CRL-1176
Ehlers-Danlos syndrome, type II (hemorrhagic type)	Fe Bos	CRL-1177

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.

Genetic Variant Fibroblasts

Condition	Name	ATCC® No.
Ehlers-Danlos syndrome, type III	Ray Hot	CRL-1226
Ehlers-Danlos syndrome, type III	Or De	CRL-1366
Ehlers-Danlos syndrome, type IV	Lu Rob	CRL-1397
Ehlers-Danlos syndrome, type V	Da Mo	CRL-1383
Ehlers-Danlos syndrome, type VI (hemorrhagic type)	La Bel	CRL-1179
Ehlers-Danlos syndrome, type VI (hemorrhagic type)	La Bel II	CRL-1195
Ehlers-Danlos syndrome, type VII (arthrochalasia type)	Ma San	CRL-1148
Ehlers-Danlos syndrome, type VII (arthrochalasia type)	El Don	CRL-1149
Ehlers-Danlos syndrome, type VII (arthrochalasia type)	Mel Neg	CRL-1193
Epidermolysis bullosa simplex	HB	CRL-7729*
Fanconi's anemia	HG-261	CCL-122
Galactosemia	Detroit 510	CCL-72
Galactosemia; galactose-1-phosphate uridyl transferase deficient	CHP 3 (M.W.)	CCL-132
Galactosemia; galactose-1-phosphate uridyl transferase deficient	CHP 4	CCL-133
Gardner's syndrome	GS-109-V-20	CRL-1610
Gardner's syndrome	GS-109-V-34	CRL-1613
Gardner's syndrome	GS-109-V-63	CRL-1614
Gardner's syndrome	GS-109-V-21	CRL-1643
Gardner's syndrome	GS-109-IV-8	CRL-1672
Hereditary adenomatosis	182-PF SK	CRL-1532
Hereditary adenomatosis (Gardner's variant)	166-ME SK	CRL-1533
Klinefelter syndrome	Dempsey	CCL-28
Lesch-Nyhan syndrome	Sal Mat	CRL-1110
Marfan syndrome	Ce Geg	CRL-1173
Marfan syndrome	Le Ana	CRL-1192
Marfan syndrome	De Te	CRL-1249
Marfan syndrome	May Roy	CRL-1250
Marfan syndrome	Mar Nol	CRL-1257
Marfan syndrome	Ra Bot	CRL-1265
Marfan syndrome	An Zan	CRL-1266
Marfan syndrome	Wa Fen	CRL-1271
Marfan syndrome	Ra Lot	CRL-1289
Methylmalonicacidemia	Amdur II	CCL-124
Osteogenesis imperfecta	Per Sel	CRL-1107
Osteogenesis imperfecta	Am Ric	CRL-1129
Osteogenesis imperfecta	RSOI	CRL-1419
Osteogenesis imperfecta (congenita)	Tal Jo	CRL-1267
Osteogenesis imperfecta (congenita)	Ba Pot	CRL-1280
Osteogenesis imperfecta (congenita)	Ran De	CRL-1287
Osteogenesis imperfecta (congenita)	Me Jon	CRL-1288
Osteogenesis imperfecta (congenita)	Ru Ra	CRL-1315
Osteogenesis imperfecta (severe congenita)	Tu To	CRL-1298
Osteogenesis imperfecta (tarda)	Wo Jo	CRL-1247
Osteogenesis imperfecta (tarda)	Ro Bon	CRL-1248
Osteogenesis imperfecta (tarda)	Da Bon	CRL-1251
Osteogenesis imperfecta (tarda)	Am Coo	CRL-1286
Osteogenesis imperfecta (tarda)	Ja Coo	CRL-1294
Osteogenesis imperfecta; fetus	Os Te	CRL-1262
Osteoporosis	Ber Lin	CRL-1132
Osteoporosis	Be Sal	CRL-1140
Poikiloderma	Ce Wal	CRL-1351
Porokeratosis	Ro Shi	CRL-1310
Pseudoachondroplasia (autosomal dominant)	Sar Nis	CRL-1231
Stiff Skin syndrome	Ne Loc	CRL-1205
Stiff Skin syndrome	He We	CRL-1338
Stiff Skin syndrome	Da Cav	CRL-1388
Turner syndrome	Detroit 525	CCL-65
Xeroderma pigmentosum	XP17BE	CRL-1360
Xeroderma pigmentosum	A68177	CRL-7714*
Xeroderma pigmentosum, presumed heterozygote	Lo Wen	CRL-1159
Xeroderma pigmentosum, presumed heterozygote	Ce Ar	CRL-1165

* Part of the NBL collection; see page 12. † Patent item; see page 12.
See the ATCC online catalogue for the complete description of a cell line.
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Genetic Variant Fibroblasts

Condition	Name	ATCC® No.
Xeroderma pigmentosum, presumed heterozygote	Be Ar	CRL-1167
Xeroderma pigmentosum, presumed heterozygote	Win Mec	CRL-1172
Xeroderma pigmentosum, presumed heterozygote	Be Tim	CRL-1254
Xeroderma pigmentosum, presumed heterozygote	Ro Vid	CRL-1308
Xerederma pigmentosum, presumed heterozygot	HTZ17BE	CRL-1361

* Part of the NBL collection; see page 12. † Patent item; see page 12.

ATCC cultures™

Immortalized Cells

Primary cells that have been immortalized with hTERT (human telomerase reverse transcriptase protein) enable use of the same consistent cell material throughout a research project without having to establish new cultures. These hTERT-immortalized cell lines are tested for extended proliferative capacity, stable genotype, the presence of selected markers and the continued expression of the hTERT protein.

These products are subject to a limited license agreement from ATCC. For more information visit the cell immortalization page of the ATCC website at www.lgcpromochem.com/atcc.

Name	Description	ATCC® No.
CHON-001	human bone cartilage fibroblast	CRL-2846
CHON-002	human bone cartilage fibroblast	CRL-2847
BJ-5ta	human foreskin fibroblast	CRL-4001
hTERT-HME1 (ME16C)	human mammary epithelium	CRL-4010
hTERT RPE-1	human retinal pigmented epithelium	CRL-4000
T HESCs	human endometrium fibroblast-like	CRL-4003

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Genes and Bioactive Compounds

This index groups ATCC cell lines by their expression of, or response to, specific genes, gene products or bioactive compounds (such as serotonin). The index was developed based on information supplied by the depositor at the time of deposit and supplemented with data from the scientific literature. This information has not been verified by ATCC. It is provided as a service to the scientific community and is not intended to be comprehensive.

The National Center for Biotechnology Information (NCBI) Entrez Gene database (www.ncbi.nlm.nih.gov/entrez) was used to organize and arrange this index. Whenever possible, the Gene Symbol and GeneID are provided. Entrez Gene was selected because it provides a curated, universal reference point for all genes and their protein products with ties to other relevant NCBI databases.

The groupings are listed alphabetically by the name of the gene/protein/compound. Human, mouse, rat and bovine gene information is provided. For other species, information on the human homolog is provided where possible. Hybridoma lines which express monoclonal antibodies to the gene/protein/compound are listed last within each grouping in purple.

The information on cell lines for specific genes, proteins, or compounds was current at the time of deposit. However, new information on gene structure, mRNA transcription, and protein expression rapidly renders this data incomplete. For example, 'acid phosphatase' was cited as a product for six of our cell lines by their various depositors prior to the discovery that there are at least seven different forms of this enzyme. On the other hand, acid phosphatase from prostate (symbol ACPP) was specifically identified for two other cell lines.

The index provides information in the following fields:

- Name (lists the name of the gene or bioactive compound)
- Gene symbol
- GeneID
- Cell line name
- Catalogue number of the cell line
- Species of the cell line or hybridoma
- Expresses, + or –

  P = product
  A = antigen
  O = oncogene
  R = receptor
  MAb = monoclonal antibody against the gene product or bioactive compound
- Comments

In the 'Expresses' column, the + or – symbol may refer to the expression of either the mRNA or the protein product of the gene. Additionally, O+ or O– for an oncogene may mean either expression of the mRNA/protein or it may mean 'activation/deactivation' of the oncogene protein product. Any information on specific sequence mutations is listed in the comments section. For more information as well as relevant references, please look up the cell line (by catalogue number) on the ATCC website.

Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Abelson murine leukemia virus				
RAW 309F.1.1	TIB-51	mouse	P+	
RAW 309 Cr.1	TIB-69	mouse	P+	
WR19M.1	TIB-70	mouse	P+	
Abelson murine leukemia virus, 16-kDa antigen				
CDR1	HB-213	rat/mouse	MAb	Anti mouse Abelson leukemia antigen
v-*abl* Abelson murine leukemia viral oncogene homolog 1: **ABL1, 25** OR homolog 2 (*arg*, Abelson-related gene): **ABL2, 27**				
COLO 201	CCL-224	human	O–	
DLD-1	CCL-221	human	O–	
HT-29	HTB-38	human	O–	
LoVo	CCL-229	human	O–	
LS 174T	CL-188	human	O–	
MSTO-211H	CRL-2081	human	O+	v-*abl*
NCI-H23	CRL-5800	human	O+	v-*abl*
SK-CO-1	HTB-39	human	O–	
SW1116	CCL-233	human	O–	
SW1417	CCL-238	human	O–	
SW480	CCL-228	human	O–	
SW620	CCL-227	human	O–	
SW948	CCL-237	human	O–	
310-29F7	CRL-2656	mouse/mouse	MAb	Anti *abl* oncogene peptide, synthetic
311-3D4	CRL-2657	mouse/mouse	MAb	Anti *abl* oncogene peptide, synthetic
312-13E8	CRL-2658	mouse/mouse	MAb	Anti *abl* oncogene peptide, synthetic
Acetylated low density lipoprotein (LDP). *See* Scavenger receptor class F, member 1.				
Acetylcholine, neuronal				
mAb270	HB-189	rat/mouse	MAb	Anti chicken and rat neuronal receptor
Acetylcholine receptor, muscarinic. *See* Cholinergic receptor, muscarinic.				
Acetylcholinesterase: **Ache, 11423**				
N1E-115	CRL-2263	mouse	P+	
NB41A3	CCL-147	mouse	P+	
Neuro-2a	CCL-131	mouse	P+	
Acetylcholinesterase (YT blood group): **ACHE, 43**				
AE-1	HB-72	mouse/mouse	MAb	Anti human acetylcholinesterase
AE-2	HB-73	mouse/mouse	MAb	Anti human acetylcholinesterase
Acid phosphatase (seven different forms: ACP 1 to 6 and P)				
CCD 1103 KIDTr	CRL-2304	human	P+	
CCD 1105 KIDTr	CRL-2305	human	P+	
CCF-STTG1	CRL-1718	human	P+	
HK-2	CRL-2190	human	P+	
MEG-01	CRL-2021	human	P+	
PC-3	CRL-1435	human	P+	
Acid phosphatase, prostate: **ACPP, 55**				
LNCaP clone FGC	CRL-1740	human	P+	
RLTM01	HB-8526†	mouse/mouse	MAb	Anti human acid PAP
RLTM02	HB-8523†	mouse/mouse	MAb	Anti human acid PAP
Actin (over 100 actins)				
MDA-MB-330	HTB-127	human	P+	
MDA-MB-435S	HTB-129	human	P+	
MDA-MB-436	HTB-130	human	P+	
SV40 MES 13	CRL-1927	mouse	P+	
RL-65	CRL-10354†	rat	P+	
SV40LT-SMC Clone H	CRL-2018	rat	P+	Alpha actin
ACT I	HB-80	mouse/mouse	MAb	Anti actin from prokaryotic organisms
ACT IV	HB-81	mouse/mouse	MAb	Anti actin from prokaryotic organisms
Actinin, alpha 1: **ACTN1, 87** OR alpha 2: **ACTN2, 88** OR alpha 3: **ACTN3, 89** OR alpha 4: **ACTN4, 81**				
G-3-5	CRL-2252	mouse/mouse	MAb	Anti human alpha actinin
Actin-binding protein. *See* Filamin.				

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Expresses: P = product, A = antigen, O = oncogene, R = receptor, MAb = monoclonal antibody.

Genes and Bioactive Compounds

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Adaptor-related protein complex 2, mu 1 subunit: **AP2M1, 1173**				
AP.6	CRL-2227	mouse/mouse	MAb	Reacts with many species
Adaptor-related protein complex AP-3, delta subunit: **Ap3d, 11776**				
mh [mocha]	CRL-2709	mouse	P–	Deficient
Adenocarcinoma-associated antigen (ACAA)				
CFPAC-1	CRL-1918	human	P+	
Adenomatosis polyposis coli: **APC, 324**				
LS1034	CRL-2158	human	O+	Mutated, deletion, GAAAAGATT → GATT at codon 1309
Adenosine A1 receptor: **Adora1, 11539** OR A2a receptor: **Adora2a, 11540** OR A2b receptor: **Adora2b, 11541** OR A3 receptor: **Adora3, 11542**				
N1E-115	CRL-2263	mouse	R+	
Adenovirus 12, early region proteins				
MCB3901	CRL-9595†	Syrian golden hamster	P+	
Adenylate phosphokinase				
BC_3H1	CRL-1443	mouse	P+	
Adrenergic alpha 1A receptor: **ADRA1A, 148**				
mAb 35	HB-8857†	rat/mouse	MAb	Reacts with a variety of species
mAb35	TIB-175	rat/mouse	MAb	Reacts with a variety of species
mAb64	HB-8987†	rat/rat	MAb	Reacts with a variety of species
Adrenergic alpha 1A receptor: **ADRA1A , 148** OR alpha 1B receptor: **ADRA1B, 147** OR alpha 1D receptor: **ADRA1D, 146** (human; hamster genes not yet curated)				
DDT_1 MF-2	CRL-1701	Syrian golden hamster	R+	
Adrenergic alpha 1B receptor: **ADRA1B, 147**				
L-α-1b	CRL-11139†	mouse	R+ (human)	
Adrenergic alpha 2A receptor: **ADRA2A, 150** OR alpha 2B receptor: **ADRA2B, 151** OR alpha 2C receptor: **ADRA2C, 152** (human; opossum genes not yet curated)				
OK	CRL-1840	opossum	R+	
Adrenergic alpha 2A receptor : **ADRA2A, 150**				
HT-29	HTB-38	human	R+	
Adrenergic beta 2 receptor, surface: **ADRB2, 154** (human; hamster gene not yet curated)				
DDT_1 MF-2	CRL-1701	Syrian golden hamster	R+	Coupled to adenyl cyclase
Adrenocorticotropic hormone (ACTH) product. *See* Corticotropin releasing hormone.				
Alanyl (membrane) aminopeptidase (aminopeptidase N, aminopeptidase M, microsomal aminopeptidase, CD13, p150): **ANPEP, 290**				
SUP-B15	CRL-1929	human	A+	
Albumin: **ALB, 213**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
THLE-3	CRL-11233†	human	P+	
Albumin: **Alb1, 11657**				
AML12	CRL-2254	mouse	P+	
Hepa 1-6	CRL-1830	mouse	P+	
Albumin: **Alb, 24186**				
H4-II-E-C3	CRL-1600	rat	P+	
MH_1C_1	CCL-144	rat	P+	
Aldosterone				
NCI-H295R	CRL-2128	human	P+	
A2E11	CRL-1846	mouse/mouse	Mab	Anti aldosterone
Alkaline phosphatase, intestinal: **ALPI, 248** OR liver/bone/kidney: **ALPL, 249** OR placental (Regan isozyme): **ALPP, 250**				
3A(tPA-30-1)	CRL-1583	human	P+	
HCT-8 (HRT-18)	CCL-244	human	P+	

Expresses: P = product, A = antigen, O = oncogene, R = receptor, MAb = monoclonal antibody.

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Genes and Bioactive Compounds

Name: Symbol, GeneID

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Alkaline phosphatase continued				
hFOB 1.19	CRL-11372†	human	P+	
HK-2	CRL-2190	human	P+	
MEG-01	CRL-2021	human	P–	
NCCIT	CRL-2073	human	P+	
ψ2 DAP	CRL-1949	mouse	P+ (human)	Human transducing vector
Alkaline phosphatase 1: **Akp1, 109899** OR 2: liver: **Akp2, 11647** OR 3: intestine, not Mn requiring: **Akp3, 11648** OR 4: **Akp4: 109879** OR 5: **Akp5, 11650**				
7F2	CRL-12557†	mouse	P+	
NE	CRL-2070	mouse	P+	
RLE-6TN	CRL-2300	mouse	P–	
W-20-17	CRL-2623	mouse	P+	
Alkaline phosphatase (zebrafish gene not yet curated)				
ZFL	CRL-2643	zebrafish	P+	
Alpha-1 acid glycoprotein				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Alpha-1 antichymotrypsin. *See* Serine proteinase inhibitor.				
Alpha-1 antitrypsin (over seven isoforms)				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Hepa 1-6	CRL-1830	mouse	P+	
AML12	CRL-2254	mouse	P+	
Alpha chemokines. *See* Chemokines, alpha.				
Alpha-fetoprotein: **AFP, 174**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
THLE-3	CRL-11233†	human	P–	
OM 3-1.1	HB-134	mouse/mouse	Mab	Anti human AFP
Alpha-fetoprotein: **Afp, 11576**				
Hepa 1-6	CRL-1830	mouse	P+	
Alpha-fetoprotein: **Afp, 24177**				
L2-RYC	CRL-2180	rat	P–	
McA-RH7777	CRL-1601	rat	P+	
McA-RH8994	CRL-1602	rat	P+	
Alpha-2-HS glycoprotein				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Alpha-2-macroglobulin: **A2M, 2**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Alpha-2-macroglobulin: **A2m, 24153**				
DI TNC_1	CRL-2005	rat	P+	
CTX TNA2	CRL-2006	rat	P+	
Alveolar surfactant protein (ASP). *See* Surfactant.				
Aminobutyric acid, gamma. *See* Gamma-aminobutyric acid.				
Amylase (more than five amylases)				
Hepa 1-6	CRL-1830	mouse	P+	
AR42J	CRL-1492	rat	P+	
Amylase, alpha 1A; salivary: **AMY1A, 276** OR alpha 1B; salivary: **AMY1B, 277** OR alpha 1C; salivary: **AMY1C, 278**				
110-5	HB-8984	mouse/mouse	MAb	Anti human salivary amylase

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Androgen receptor (dihydrotestosterone receptor, testicular feminization, spinal and bulbar muscular atrophy, Kennedy disease): **AR, 367**				
22Rv1	CRL-2505	human	R+	Responsive
LNCaP clone FGC	CRL-1740	human	R+	Responsive
MDA-kb2	CRL-2713	human	R+	
MDA PCa 2b	CRL-2422	human	R+	Sensitive
NIH:OVCAR-3	HTB-161	human	R+	
PWR-1E	CRL-11611†	human	R+	Responsive
RWPE-1	CRL-11609†	human	R+	Responsive
RWPE-2	CRL-11610†	human	R+	Responsive
T-47D	HTB-133	human	R+	
Androgen receptor: **Ar, 11835**				
TM3	CRL-1714	mouse	R+	
TM4	CRL-1715	mouse	R+	
Androgen receptor: **Ar, 24208**				
NMU	CRL-1743	rat	R+	
RBA	CRL-1747	rat	R+	
Androgen receptor (hamster gene not yet curated)				
DDT$_1$ MF-2	CRL-1701	Syrian golden hamster	R+	Responsive
Angiogenesis inhibiting factor				
LNZTA3WT11	CRL-11544†	human	P+	
LNZTA3WT4	CRL-11543†	human	P+	
Angiotensin I converting enzyme (peptidyl-dipeptidase A) 1: **ACE, 1636**				
α-ACE 3.1.1	HB-8191†	mouse/mouse	MAb	Anti mouse, bovine, and human ACE
Angiotensin converting enzyme: **Ace, 11421**				
C166	CRL-2581	mouse	P+	
EOMA	CRL-2586	mouse	P+	
α-ACE 3.1.1	HB-8191†	mouse/mouse	MAb	Anti mouse, bovine, and human ACE
Angiotensin converting enzyme (bovine gene not yet curated)				
CPAE	CCL-209	bovine	P+	
CPA 47	CRL-1733	bovine	P+	
Angiotensin II receptor, type 2: **Agtr2, 11609**				
N1E-115	CRL-2263	mouse	R+	
Annexin A1: **ANXA1, 301**				
EH17a	CRL-2209	mouse/mouse	MAb	Anti human annexin I
Annexin A1: **ANXA1, 301** AND A2: **ANXA2, 302**				
EH7a	CRL-2194	mouse/mouse	MAb	Anti human annexin I and human annexin II
Apolipoprotein A-I: **APOA1, 335**				
A5.4	CRL-2275	mouse/mouse	MAb	Anti human Apo-A-I
Apolipoprotein E: **APOE, 348**				
WU E-14	CRL-2255	mouse/mouse	MAb	Anti human APOE
WU E-4	CRL-2247	mouse/mouse	MAb	Anti human APOE
Apomucin. *See* Mucin 5.				
Arginine vasopressin: **Avp, 24221**				
PS 41	CRL-1799	mouse/mouse	MAb	Anti rat NP-AVP
PS 45	CRL-1798	mouse/mouse	MAb	Anti rat NP-AVP
Aryl-hydrocarbon receptor: **Ahr, 11622**				
BpRcl	CRL-2217	mouse	R+	
Hepa-1c1c7	CRL-2026	mouse	R+	
tao BpRcl	CRL-2218	mouse	R+	
Aryl-hydrocarbon receptor (species not yet curated)				
PLHC-1	CRL-2406	topminnow	R+	
Aryl hydrocarbon hydroxylase. *See* Cytochrome P450.				
ATP binding cassette, sub-familyB (MDR/TAP), member 1: **ABCB, 5243**				
ES-2	CRL-1978	human	P+	
Atrial natriuretic peptide (ANP). *See* Natriuretic peptide receptor.				
B cell growth factor 1 (12kD): **BCGF1, 588** (human; mouse gene not yet curated)				
11B11	HB-188	rat/mouse	MAb	Anti mouse BCGF-1

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B cell stimulating factor 1 (BSF-1)				
Cl. Ly1^{+}2^{-}/9	CRL-8179†	mouse	P+	
11B11	HB-188	rat/mouse	MAb	Anti mouse BSF-1
B7-1. *See* CD80 (B7-1).				
B7.2. *See* CD86 (B7-2).				
Beta-endorphin. *See* Proopiomelanocortin.				
Beta-galactosidase. *See* Galactosidase, beta 1.				
Beta-lipoprotein. *See* Lipoprotein, beta.				
Beta-2-microglobulin: **B2M, 567**				
HEL 92.1.7	TIB-180	human	P+	
LS1034	CRL-2158	human	P+	
LS513	CRL-2134	human	P+	
SUP-T1	CRL-1942	human	P+	
U-937	CRL-1593.2†	human	P+	
J26	CRL-1802	mouse	P+ (human)	
BBM.1	HB-28	mouse/mouse	MAb	Anti human beta-2-microglobulin
L368	HB-149	mouse/mouse	MAb	Anti human beta-2-microglobulin
Beta-2-microglobulin: **B2m, 24223**				
4C9	CRL-2437	mouse/mouse	MAb	Anti rat beta-2-microglobulin
Bone gamma carboxyglutamate protein 1: **Bglap1, 12096** OR protein 2: **Bglap2, 12097**				
MC3T3-E1 Subclone 14	CRL-2594	mouse	P+	
MC3T3-E1 Subclone 24	CRL-2595	mouse	P–	
MC3T3-E1 Subclone 30	CRL-2596	mouse	P–	
MC3T3-E1 Subclone 4	CRL-2593	mouse	P+	
Bone resorbing steroid hormone. *See* Vitamin D.				
Bone sialoprotein (BSP). *See* Secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1).				
BP-1 (glutamyl aminopeptidase): **Enpep, 13809**				
2E8	TIB-239	mouse	A+	
BP-4				
MCF7	HTB-22	human	P+	
BP-5				
MCF7	HTB-22	human	P+	
Bp35 (B cell antigen). *See* Membrane-spanning 4-domains.				
Bp50 (B cell antigen). *See* Tumor necrosis factor receptor superfamily, member 5.				
Bradykinin receptor B1: **BDKRB1, 623** OR receptor B2: **BDKRB2 , 624**				
HGF-1	CRL-2014	human	R+	Sensitive
Bradykinin receptor, beta: **Bdkrb, 12061** OR receptor, beta 2: **Bdkrb2, 12062**				
N1E-115	CRL-2263	mouse	R+	
Breast cancer 1, early onset: **BRCA1, 672**				
HCC1937	CRL-2336	human	O+	Insertion C at nucleotide 5382
HCC1937 BL	CRL-2337	human	O+	Insertion C at nucleotide 5382
Breast cancer 2, early onset: **BRCA2, 675**				
PL45	CRL-2558	human	O+	Wild-type
C19 steroids				
NCI-H295R	CRL-2128	human	P+	
C3 activator				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
CA19-9				
CFPAC-1	CRL-1918	human	A+	
NCI-H498	CCL-254	human	A+	
NCI-H508	CCL-253	human	A+	
NCI-H716	CCL-251	human	A–	
NCI-H747	CCL-252	human	A+	
Calcitonin receptor: **CALCR , 799**				
IM-9	CCL-159	human	R+	
T-47D	HTB-133	human	R+	

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Calcitonin/calcitonin-related polypeptide, alpha: **CALCA, 796**				
DMS 153	CRL-2064	human	P+	
DMS 53	CRL-2062	human	P+	
DMS 79	CRL-2049	human	P+	
TT	CRL-1803	human	P+	Produces high levels
Calcitonin/calcitonin-related polypeptide, alpha: **Calca, 12310**				
MTC-M	CRL-1806	mouse	P+	
Calcitonin/calcitonin-related polypeptide, alpha: **Calca, 24241**				
6-23 (Clone 6)	CRL-1607	rat	P+	
Carcinoembryonic antigen (CEA) (approximately 20 CEA genes)				
AsPC-1	CRL-1682	human	P+	
BxPC-3	CRL-1687	human	P+	
CFPAC-1	CRL-1918	human	P+	
COLO 205	CCL-222	human	P+	
DLD-1	CCL-221	human	P+	
HCT 116	CCL-247	human	P+	
HCT-15	CCL-225	human	P+	
HT-29	HTB-38	human	P+	
HCT-8 (HRT-18)	CCL-244	human	P+	
LoVo	CCL-229	human	P+	
LS1034	CRL-2158	human	A+	
LS123	CCL-255	human	P+	
LS 174T	CL-188	human	P+	
LS 180	CL-187	human	P+	
LS411N	CRL-2159	human	A+	
LS513	CRL-2134	human	A+	
NCI-H498	CCL-254	human	P+	
NCI-H508	CCL-253	human	P+	
NCI-H548	CCL-249	human	P+	
NCI-H747	CCL-252	human	P+	
NCI-N87	CRL-5822	human	A+	
SNU-1	CRL-5971	human	A+	
SNU-16	CRL-5974	human	A+	
SNU-5	CRL-5973	human	A+	
RF-1	CRL-1864	human	P+	
SNU-C2B	CCL-250	human	P+	
SNU-C2A	CCL-250.1	human	P+	
SU.86.86	CRL-1837	human	P+	
SW1116	CCL-233	human	P+	
SW1417	CCL-238	human	P+	
SW1463	CCL-234	human	P+	
SW403	CCL-230	human	P+	
SW48	CCL-231	human	P+	
SW480	CCL-228	human	P+	
SW620	CCL-227	human	P+	
SW837	CCL-235	human	P+	
SW948	CCL-237	human	P+	
T84	CCL-248	human	P+	
TT	CRL-1803	human	P+	
WiDr	CCL-218	human	P+	
1116NS-3d	CRL-8019†	mouse/mouse	MAb	Anti CEA
T84.66A3.1A.1F2	HB-8747	mouse/mouse	MAb	Anti CEA
Caseinase (stromelysin). *See* Matrix metalloproteinase 3.				
Catecholamines				
PC-12	CRL-1721	rat	P+	
Cathepsin L: **Ctsl, 13039**				
EOMA	CRL-2586	mouse	P+	

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
CD1A antigen, a polypeptide: **CD1A, 909** OR 1B antigen, b polypeptide: **CD1, 910B** OR 1C antigen, c polypeptide: **CD1C, 911** OR 1D antigen, d polypeptide: **CD1D, 912** OR 1E antigen, e polypeptide: **CD1E, 913**				
MOLT-3	CRL-1552	human	A+	
MOLT-4	CRL-1582	human	A+	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
OKT 6	CRL-8020†	mouse/mouse	MAb	Anti human CD1
CD1 antigen complex: **Cd1, 11334** OR 1d1 antigen: **Cd1d1, 12479**				
15C6	HB-326	rat/mouse	MAb	Anti mouse CD1.1
15F7	HB-322	rat/mouse	MAb	Anti mouse CD1.1
19F8	HB-321	rat/mouse	MAb	Anti mouse CD1.1
20H2	HB-323	rat/mouse	MAb	Anti mouse CD1.1
4C4	HB-327	rat/mouse	MAb	Anti mouse CD1.1
CD1 (species not yet curated)				
76-7-4	HB-140	mouse/mouse	MAb	Anti pig CD1
CC20	HB-267	mouse/mouse	MAb	Anti bovine CD1 (CD1w2)
CD1A antigen, a polypeptide: **CD1A, 909**				
SUP-B15	CRL-1929	human	A–	
SUP-T1	CRL-1942	human	A+	
CD2 antigen (p50), sheep red blood cell receptor: **CD2, 914**				
BC-3	CRL-2277	human	A–	
DS-1	CRL-11102†	human	A+/–	
HH	CRL-2105	human	A+	
J45.01	CRL-1990	human	A+	
MJ	CRL-8294†	human	A+	
MOLT-4	CRL-1582	human	A+	
NK-92	CRL-2407	human	A+	
NK-92CI	CRL-2409	human	A+	
NK-92MI	CRL-2408	human	A+	
SUP-B15	CRL-1929	human	A–	
SUP-T1 [VB]	CRL-1942	human	A–	
TALL-104	CRL-11386†	human	A+	
35.1	HB-222	mouse/mouse	MAb	Anti human CD2
OKT 11	CRL-8027†	mouse/mouse	MAb	Anti human CD2
TM1	HB-169	mouse/mouse	MAb	Anti human CD2
TS2/18.1.1	HB-195	mouse/mouse	MAb	Anti human CD2
CD2 (species not yet curated)				
36F-18C	HB-285	mouse/mouse	MAb	Anti sheep CD2
CC42	HB-272	mouse/mouse	MAb	Anti bovine CD2
IL-A42	CRL-1870	mouse/mouse	MAb	Anti bovine CD2
CD3D antigen, delta polypeptide (TiT3 complex): **CD3D, 915** OR 3E antigen, epsilon polypeptide (TiT3 complex): **CD3E, 916** OR 3G antigen, gamma polypeptide (TiT3 complex): **CD3G, 917**				
BC-3	CRL-2277	human	A–	
DS-1	CRL-11102†	human	A+/–	
HH	CRL-2105	human	A+	
J45.01	CRL-1990	human	A+	
Jurkat, Clone E6-1	TIB-152	human	A+	
J.RT3-T3.5	TIB-153	human	A–	
MJ	CRL-8294†	human	A+	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
SUP-B15	CRL-1929	human	A–	
SUP-T1	CRL-1942	human	A+	
TALL-104	CRL-11386†	human	A+	

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38.1	HB-231	mouse/mouse	MAb	Anti human CD3
OKT 3	CRL-8001†	mouse/mouse	MAb	Anti human CD3
CD3E antigen, epsilon polypeptide (TiT3 complex): **CD3E, 916**				
BC3	HB-10166†	mouse/mouse	MAb	Anti human CD3, epsilon chain
CD3 (cat gene not yet curated)				
MYA-1	CRL-2417	cat	A+	
CD3 antigen, delta polypeptide: **Cd3d, 12500** OR epsilon polypeptide: **Cd3e, 12501** OR gamma polypeptide: **Cd3g, 12502**				
145-2C11	CRL-1975	Armenian hamster/ mouse	MAb	Anti mouse CD3
CD3A				
MOLT-4	CRL-1582	human	A+	
Reh	CRL-8286†	human	A+	
CD3B				
CCRF-CEM	CCL-119	human	A+	
MOLT-4	CRL-1582	human	A+	
Reh	CRL-8286†	human	A+	
CD3C				
MOLT-4	CRL-1582	human	A+	
Reh	CRL-8286†	human	A+	
CD4 antigen (p55): **CD4, 920**				
8E5	CRL-8993†	human	A+	
BC-3	CRL-2277	human	A–	
C8-B4	CRL-2540	human	A+	
CCRF-CEM	CCL-119	human	A+	
D1.1	CRL-10915†	human	A–	
DS-1	CRL-11102†	human	A–	
H9	HTB-176	human	A+	
HH	CRL-2105	human	A+	
HuT 102	TIB-162	human	A+	
HuT 78	TIB-161	human	A+	
MJ	CRL-8294†	human	A+	
MOLT-3	CRL-1552	human	A+	
MOLT-4	CRL-1582	human	A+	
MV-4-11	CRL-9591†	human	A+	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
Reh	CRL-8286†	human	A+	
SUP-B15	CRL-1929	human	A–	
SUP-T1	CRL-1942	human	A+	
TALL-104	CRL-11386†	human	A–	
OKT 4	CRL-8002†	mouse/mouse	MAb	Anti human CD4
CD4 antigen: **Cd4, 12504**				
AKR1.G.1.OVA^{R}.1.26	TIB-232	mouse	A+	
GK1.5	TIB-207	rat/mouse	MAb	Anti mouse CD4
CD4 antigen (species not yet curated)				
MYA-1	CRL-2417	cat	A+	
17D	HB-262	mouse/mouse	MAb	Anti sheep CD4
74-12-4	HB-147	mouse/mouse	MAb	Anti pig CD4a
CC30	HB-270	mouse/mouse	MAb	Anti bovine CD4 (BoCD4)
CC8	HB-280	mouse/mouse	MAb	Anti bovine CD4 (BoCD4)
IL-A11	CRL-1879	mouse/mouse	MAb	Anti bovine CD4 (BoCD4)
CD5 antigen (p56-62): **CD5, 921**				
8E5	CRL-8993†	human	A+	
BC-3	CRL-2277	human	A–	
CCRF-CEM	CCL-119	human	A+	
CCRF-HSB-2	CCL-120.1	human	A+	
DS-1	CRL-11102†	human	A–	
MOLT-3	CRL-1552	human	A+	

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Genes and Bioactive Compounds

Name: Symbol, GeneID

Cell Line Name	ATCC® No.	Species	Expresses	Comments
CD5 antigen (p56-62) continued				
MOLT-4	CRL-1582	human	A+	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
SUP-B15	CRL-1929	human	A–	
SUP-T1	CRL-1942	human	A+	
OKT 1	CRL-8000†	mouse/mouse	MAb	Anti human CD5
CD5 antigen: **Cd5, 12507**				
AMJ2-C11	CRL-2456	mouse	A–	Lyt 1
AMJ2-C8	CRL-2455	mouse	A–	Lyt 1
NFS-25 C-3	CRL-1695	mouse	A+	
NFS-5 C-1	CRL-1693	mouse	A+	
NFS-70 C-10	CRL-1694	mouse	A+	
PMJ2-PC	CRL-2457	mouse	A–	Lyt 1.1; Lyt 1.2
PMJ2-R	CRL-2458	mouse	A–	Lyt 1.1; Lyt 1.2
53-7.313	TIB-104	rat/mouse	MAb	Anti mouse LYT 1 (all alleles)
CD5 antigen (p56-62): **CD5, 280745**				
CC29	HB-269	mouse/mouse	MAb	Anti bovine CD5 (BoCD5)
CC17	HB-281	mouse/mouse	MAb	Anti bovine CD5 (BoCD5)
CD6 antigen: **CD6, 923**				
MOLT-4	CRL-1582	human	A+	
12.1	HB-228	mouse/mouse	MAb	Anti human CD6
3Pt12B8	HB-8136†	mouse/mouse	MAb	Anti human CD6
CD6 antigen: **CD6, 282881**				
CC38	HB-266	mouse/mouse	MAb	Anti bovine CD6 (BoCD6)
CD7 antigen (p41): **CD7, 924**				
CCRF-CEM	CCL-119	human	A+	
CCRF-HSB-2	CCL-120.1	human	A+	
DS-1	CRL-11102†	human	A–	
K-562	CCL-243	human	A+	
MOLT-3	CRL-1552	human	A+	
MOLT-4	CRL-1582	human	A+	
SUP-T1	CRL-1942	human	A+	
T1 (174 x CEM.T1)	CRL-1991	human	A+	
T2 (174 x CEM.T2)	CRL-1992	human	A+	
NK-92	CRL-2407	human	A+	
NK-92MI	CRL-2408	human	A+	
NK-92CI	CRL-2409	human	A+	
TALL-104	CRL-11386†	human	A+	
T3-3A1	HB-2	mouse/mouse	MAb	Anti human CD7
CD8 antigen, alpha polypeptide (p32): **CD8A, 925** OR beta polypeptide 1 (p37): **CD8B1, 926**				
BC-3	CRL-2277	human	A–	
DS-1	CRL-11102†	human	A–	
HH	CRL-2105	human	A–	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
SUP-B15	CRL-1929	human	A–	
SUP-T1	CRL-1942	human	A+	
TALL-104	CRL-11386†	human	A+	
51.1	HB-230	mouse/mouse	MAb	Anti human CD8
OKT 8	CRL-8014†	mouse/mouse	MAb	Anti human CD8
S6F1	HB-9579†	mouse/mouse	MAb	Anti human CD8
CD8 antigen, alpha chain: **Cd8a, 12525**				
AKR1.G.1.OVAR.1.26	TIB-232	mouse	A+	Lyt-2
116-13.1	HB-129	mouse/mouse	MAb	Anti mouse Lyt 2
2.43	TIB-210	rat/mouse	MAb	Anti mouse Lyt 2.2
3.155	TIB-211	rat/mouse	MAb	Anti mouse Lyt 2 (all alleles)
41-3.48	HB-130	mouse/mouse	MAb	Anti mouse Lyt 2.2

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
53-6.72	TIB-105	rat/mouse	MAb	Anti mouse Lyt 2 (all alleles)
83-12-5	CRL-1971	mouse/mouse	MAb	Anti mouse Lyt 2.2 (CD8 alpha 2.2)
HO-2.2	TIB-150	mouse/mouse	MAb	Anti mouse Lyt 2.2
CD8 antigen, alpha chain: **Cd8a, 12525** OR beta chain: **Cd8b, 12526**				
TK-1	CRL-2396	mouse	A+	
36.5	CRL-11116†	mouse	A–	
CD8 antigen, alpha polypeptide (p32): **CD8A: 281060**				
CC58	HB-275	mouse/mouse	MAb	Anti bovine CD8 (BoCD8)
CC63	HB-264	mouse/mouse	MAb	Anti bovine CD8 (BoCD8)
IL-A51	CRL-1871	mouse/mouse	MAb	Anti bovine CD8 (BoCD8)
CD8 antigen (species not yet curated)				
MYA-1	CRL-2417	cat	A–	Feline CD8–
CD9 antigen (p24): **CD9, 928**				
RS4	CRL-1873	human	A+	
CD9 antigen: **Cd9 12527**				
KMC8.8	CRL-2212	rat/mouse	MAb	Anti mouse CD9
CD10. *See* Membrane metallo-endopeptidase.				
CD11a. *See* Integrin, alpha L.				
CD11b. *See* Integrin, alpha M.				
CD11b/CD18. *See* Integrin, alpha M AND Integrin, beta 2.				
CD11c. *See* Integrin, alpha X.				
CD13. *See* Alanyl (membrane) aminopeptidase.				
CD14 antigen: **CD14, 929**				
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
26ic	HB-246	mouse/mouse	MAb	Anti human CD14
3C10	TIB-228	mouse/mouse	MAb	Anti human CD14
60bca	HB-247	mouse/mouse	MAb	Anti human CD14
CD15				
AML-193	CRL-9589†	human	A+	
MV-4-11	CRL-9591†	human	A+	
SUP-B15	CRL-1929	human	A–	
CD16. *See* Fc fragment of IgG, low affinity IIIa, receptor for (CD16).				
CD 18. *See* Integrin, beta 2.				
CD19 antigen: **CD19, 930**				
29SR	CRL-2262	human	A–	
ARH-77	CRL-1621	human	A+	
BC-3	CRL-2277	human	A–	
DB	CRL-2289	human	A+	
Farage	CRL-2630	human	A+	
GA-10	CRL-2392	human	A+	
HS-Sultan	CRL-1484	human	A+	
HT	CRL-2260	human	A+	
IM-9	CCL-159	human	A+	
JM1	CRL-10423†	human	A+	
MC/CAR	CRL-8083†	human	A+	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
Pfeiffer	CRL-2632	human	A+	
RL	CRL-2261	human	A+	
RPMI 8226	CCL-155	human	A–	
Toledo	CRL-2631	human	A+	
CD19 antigen: **Cd19, 12478**				
1D3	HB-305	rat/mouse	MAb	Anti mouse CD19
CD20. *See* Membrane-spanning 4-domains.				
CD21. *See* Complement component (3d/Epstein Barr virus) receptor 2.				
CD22 antigen: **CD22, 933**				
29SR	CRL-2262	human	A–	

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Genes and Bioactive Compounds

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CD22 antigen continued				
BC-3	CRL-2277	human	A–	
DB	CRL-2289	human	A+	
Farage	CRL-2630	human	A+	
HT	CRL-2260	human	A+	
RL	CRL-2261	human	A+	
CD22 antigen: **Cd22, 12483**				
Cy34.1.2	TIB-163	mouse/mouse	MAb	Anti mouse LYB 8.2
CD23. *See* Fc fragment of IgE, low affinity II, receptor for (CD23A).				
CD24 antigen (small cell lung carcinoma cluster 4 antigen): **CD24, 934**				
RS4	CRL-1873	human	A+	
CD25. *See* Interleukin 2 receptor, alpha.				
CD28 antigen (Tp44): **CD28, 940**				
ARH-77	CRL-1621	human	A+	
HS-Sultan	CRL-1484	human	A–	
J45.01	CRL-1990	human	A+	
MC/CAR	CRL-8083†	human	A–	
NK-92	CRL-2407	human	A+	
NK-92CI	CRL-2409	human	A+	
NK-92MI	CRL-2408	human	A+	
RPMI 8226	CCL-155	human	A+	
CD28 antigen: **Cd28, 12487**				
PV1	HB-12352	Armenian hamster/ mouse	MAb	Anti mouse CD28
CD29. *See* Integrin, beta 1.				
CD30. *See* Tumor necrosis factor receptor superfamily, member 8.				
CD 31. *See* Platelet/endothelial cell adhesion molecule (CD31 antigen).				
CD32. *See* Fc fragment of IgG, low affinity IIa, receptor for (CD32).				
CD33 antigen: **CD33, 945**				
SUP-B15	CRL-1929	human	A–	
M195	HB-10306	mouse/mouse	MAb	Anti human myeloid leukemia (CD33)
CD34 antigen: **CD34, 947**				
GA-10	CRL-2392	human	A–	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
TF-1a	CRL-2451	human	A+	
AC133.1	HB-12346	mouse/mouse	MAb	Anti human CD34
CD35. *See* Complement component (3b/4b) receptor 1.				
CD38 antigen (p45): **CD38, 952**				
ARH-77	CRL-1621	human	A–	
BC-3	CRL-2277	human	A+	
DS-1	CRL-11102	human	A–	
Farage	CRL-2630	human	A+	
HS-Sultan	CRL-1484	human	A+	
IM-9	CCL-159	human	A–	
MC/CAR	CRL-8083†	human	A+	
NCI-H929	CRL-9068†	human	A+	
Pfeiffer	CRL-2632	human	A+	
RPMI 8226	CCL-155	human	A+	
SUP-B15	CRL-1929	human	A+	
SUP-T1	CRL-1942	human	A+	
TF-1a	CRL-2451	human	A–	
Toledo	CRL-2631	human	A+	
OKT 10	CRL-8022	mouse/mouse	MAb	Anti human CD38
THB-7	HB-136	mouse/mouse	MAb	Anti human CD38
CD39. *See* Ectonucleoside triphosphate diphosphohydrolase 1.				
CD40. *See* Tumor necrosis factor receptor superfamily, member 5.				
CD40L; CD40 ligand. *See* Tumor necrosis factor (ligand) superfamily, member 5 (hyper-IgM syndrome).				
CD41. *See* Integrin, alpha 2b.				
CD44 antigen (homing function and Indian blood group system): **CD44, 960**				

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Farage	CRL-2630	human	A+	
FW11-10-3	HB-257	mouse/mouse	MAb	Anti human CD44, V4 variant
FW11-24-17-36	HB-258	mouse/mouse	MAb	Anti human CD44, V9 variant
FW11-9-2	HB-256	mouse/mouse	MAb	Anti human CD44, V6 variant
Hermes-3	HB-9480†	mouse/mouse	MAb	Anti human CD44
CD44 antigen: **Cd4, 12505**				
KM114	TIB-242	rat/mouse	MAb	Anti mouse CD44
KM201	TIB-240	rat/mouse	MAb	Anti mouse CD44
KM703	CRL-1896	rat/mouse	MAb	Anti mouse CD44
KM81	TIB-241	rat/mouse	MAb	Anti mouse CD44
LYK-1	HB-306	rat/mouse	MAb	Anti mouse CD44, isoforms expressing variable exon V10
LYK-12	HB-316	rat/mouse	MAb	Anti mouse CD44
LYK-16	HB-319	rat/mouse	MAb	Anti mouse CD44
LYK-5	HB-310	rat/mouse	MAb	Anti mouse CD44
LYK-7	HB-311	rat/mouse	MAb	Anti mouse CD44, isoforms expressing variable exon V10
LYK-8	HB-312	rat/mouse variable exon V10	MAb	Anti mouse CD44, isoforms expressing
LYK-9	HB-313	rat/mouse variable exon V10	MAb	Anti mouse CD44, isoforms expressing
CD45. *See* Protein tyrosine phosphatase, receptor type C.				
CD47 antigen (Rh-related antigen, integrin-associated signal transducer): **CD47, 961**				
B6H12.2	HB-9771†	mouse/mouse	MAb	Anti human CD47
CD49a. *See* Integrin, alpha 1.				
CD49d. *See* Integrin, alpha 4.				
CD49e. *See* Integrin, alpha 5.				
CD54. *See* Intercellular adhesion molecule 1 (ICAM1).				
CD56. *See* Neural cell adhesion molecule 1 (NCAM1).				
CD57 antigen: **CD57, 964**				
DMS 114	CRL-2066	human	A+	
DMS 153	CRL-2064	human	A+	
DMS 53	CRL-2062	human	A+	
DMS 79	CRL-2049	human	A+	
SHP-77	CRL-2195	human	A+	
HNK-1	TIB-200	mouse/mouse	MAb	Anti human CD57
CD58 antigen (lymphocyte function-associated antigen 3): **CD58, 965**				
Farage	CRL-2630	human	A+	
TS2/9.1.4.3	HB-205	mouse/mouse	MAb	Anti human CD58
CD 61. *See* Integrin, beta 3.				
CD62E. *See* Selectin E.				
CD62L. *See* Selectin L.				
CD 62P. *See* Selectin P.				
CD71. *See* Transferrin receptor.				
CD72 antigen: **Cd72, 12517**				
NFS-25 C-3	CRL-1695	mouse	A+	
NFS-5 C-1	CRL-1693	mouse	A+	
NFS-70 C-10	CRL-1694	mouse	A+	
10-1.D.2	TIB-165	mouse/mouse	MAb	Anti mouse LYB 2.1
CD77				
GA-10	CRL-2392	human	A+	
GA-10 (Clone 4)	CRL-2393	human	A+	
GA-10 (Clone 20)	CRL-2394	human	A+	
CD80 antigen: **Cd80, 12519**				
C1498	TIB-49	mouse	A–	
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
16-10A1	HB-301	hamster/mouse	MAb	Anti mouse CD80 (B7-1)
1G10	CRL-2223	rat/mouse	MAb	Anti mouse B7.1

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
CD86 antigen: **Cd86, 12524**				
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A–	
2D10	CRL-2226	rat/mouse	MAb	Anti mouse B7-2
GL1	HB-253	rat/mouse	MAb	Anti mouse B7-2
CD106. *See* Vascular cell adhesion molecule 1 (VCAM).				
CD115. *See* Colony stimulating factor 1 receptor.				
CD117. *See kit.*				
CD151 antigen: **CD151, 977**				
41-2	CRL-2695	mouse/mouse	MAb	Anti human CD151
50-6	CRL-2696	mouse/mouse	MAb	Anti human CD151
CD152 antigen: **Cd152, 12477**				
UC10-4F10-11	HB-304	Armenian hamster/ mouse	MAb	Anti mouse CTLA-4
CD154. *See* Tumor necrosis factor (ligand) superfamily, member 5 (hyper-IgM syndrome).				
CD164 antigen, sialomucin: **CD164, 8763**				
MCF-12A	CRL-10782†	human	P+	
MCF-12F	CRL-10783†	human	P+	
CDw14				
MEG-01	CRL-2021	human	A+	
CDw128. *See* Interleukin 8 receptor, beta.				
Centromere protein B (80kD): **CENPB, 1059**				
2D-7	HB-9667†	mouse/mouse	MAb	Anti human CENP-B
Ceruloplasmin (ferroxidase): **CP, 1356**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
c-*fos*. *See fos*.				
Chemokines, alpha				
BEND	CRL-2398	bovine	P+	In response to interferon
Cholecystokinin: **CCK, 885**				
SK-PN-DW	CRL-2139	human	P+	
Cholecystokinin-8				
HCN-1A	CRL-10442†	human	P+	
HCN-2	CRL-10742†	human	P+	
Cholesterol				
FL83B	CRL-2390	mouse	P+	
2C5-6	HB-8995†	mouse/mouse	MAb	Anti cholesterol
Choline acetyltransferase: **Chat, 12647**				
NB41A3	CCL-147	mouse	P+	
Cholinergic receptor, muscarinic 1, CNS: **Chrm1, 12669**				
N1E-115	CRL-2263	mouse	R+	
Cholinergic receptor, muscarinic 2: **CHRM2, 1129**				
HEL 299	CCL-137	human	R+	
Cholinergic receptor, muscarinic 2, cardiac: **Chrm2, 107850**				
N1E-115	CRL-2263	mouse	R+	
Cholinergic receptor, muscarinic 3: **Chrm3, 24260**				
M1WT2	CRL-1984	Chinese hamster	R+ (rat)	
M1WT3	CRL-1985	Chinese hamster	R+ (rat)	
M1WT5	CRL-1986	Chinese hamster	R+ (rat)	
M3WT4	CRL-1981	Chinese hamster	R+ (rat)	
M3WT5	CRL-1982	Chinese hamster	R+ (rat)	
M3WT8	CRL-1983	Chinese hamster	R+ (rat)	
Cholinergic receptor, muscarinic 1: **CHRM1, 1128** OR muscarinic 2: **CHRM2, 1129** OR muscarinic 3: **CHRM3, 1131**				
DMS 53	CRL-2062	human	R+	
NCI-N87	CRL-5822	human	R+	
NCI-SNU-16	CRL-5974	human	R+	
NCI-SNU-5	CRL-5973	human	R+	

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Genes and Bioactive Compounds

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Cholinergic receptor, muscarinic 1, CNS: **Chrm1, 12669** OR muscarinic 2, cardiac: **Chrm2, 107850** OR muscarinic 3, cardiac: **Chrm3, 12671**				
266-6	CRL-2151	mouse	R+	
BC_3H1	CRL-1443	mouse	R+	
G-8	CRL-1456	mouse	R+	Highly responsive
H7c2 (2-1)	CRL-1446	mouse	R+	Responsive
Chondroitin sulfate proteoglycan (more than five isoforms)				
L2-RYC	CRL-2180	rat	P+	
Chorionic gonadotropin receptor. *See* Luteinizing hormone/choriogonadotropin receptor.				
Chorionic gonadotropin (hCG). *See* Glycoprotein hormones (alpha and/or beta).				
Chorionic somatomammotropin hormone 1 (placental lactogen): **CSH1, 1442** OR hormone 2: **CSH2, 1443**				
BeWo	CCL-98	human	P+	
JAR	HTB-144	human	P+	
JEG-3	HTB-36	human	P+	
Choroideremia (Rab escort protein 1): **CHM, 1121**				
IgG-2F1	CRL-2419	mouse/mouse	MAb	Anti human REP-1
c-H-*ras*. *See ras.*				
Chromogranin A (parathyroid secretory protein 1): **CHGA, 1113**				
HP75	CRL-2506	human	P+	
HPAC	CRL-2119	human	P–	
Ciliary neurotrophic factor receptor: **CNTFR, 1271**				
TF-1	CRL-2003	human	R–	
TF-1.CN5a.1	CRL-2512	human	R+	Responsive (alpha subunit of CNTF)
c-*kit*. *See kit.*				
Clathrin, brain				
CVC.4	TIB-137	mouse/mouse	MAb	Anti bovine brain clathrin
Clathrin, heavy polypeptide (Hc): **CLTC, 1213**				
TD.1	CRL-2232	mouse/mouse	MAb	Anti human clathrin, heavy chain
X22	CRL-2228	mouse/mouse	MAb	Anti human clathrin, heavy chain
Clathrin, light polypeptide (Lca): **CLTA, 1211** OR polypeptide (Lcb): **CLTB, 1212**				
CON.1	CRL-2229	mouse/mouse	MAb	Anti human clathrin, light chain
Clathrin, light polypeptide (Lca): **CLTA, 281078** OR chain B: **CLTB, 281079**				
CVC.1	TIB-135	mouse/mouse	MAb	Anti bovine clathrin, light chain
CVC.7	TIB-138	mouse/mouse	MAb	Anti bovine clathrin, light chain
c-*myb*. *See myb*.				
c-*myc*. *See myc.*				
Coagulation factor II (thrombin): **F2, 2147**				
JO1-1	HB-8638†	mouse/mouse	MAb	Anti human abnormal prothrombin
Coagulation factor 2: **F2, 29251**				
H4-II-E-C3	CRL-1600	rat	P+	
Coagulation factor II (thrombin) receptor: **F2r, 14062**				
N1E-115	CRL-2263	mouse	R+	
Coagulation factor VIII, procoagulant component (hemophilia A): **F8, 2157**				
HUV-EC-C	CRL-1730	human	P+	
MEG-01	CRL-2021	human	P+	
Coagulation factor VIII: **F8, 14069**				
M2-10B4	CRL-1972	mouse	P–	
Coagulation factor VIII (species not yet curated)				
CPA 47	CRL-1733	bovine	P+	
EJG	CRL-8659†	bovine	P+	
RF/6A	CRL-1780	Rhesus monkey	P+	
Collagen				
KEL FIB	CRL-1762	human	P+	
3T6-Swiss albino	CCL-96	mouse	P+	
MC3T3-E1 Subclone 14	CRL-2594	mouse	P+	
MC3T3-E1 Subclone 24	CRL-2595	mouse	P+	
MC3T3-E1 Subclone 30	CRL-2596	mouse	P+	

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Name: Symbol, GeneID				
Collagen continued				
MC3T3-E1 Subclone 4	CRL-2593	mouse	P+	
Collagen, bone type 1				
1H11	HB-10611†	mouse/mouse	MAb	Anti collagen, bone type 1
Collagen, type IV (six type IV collagens)				
EHS	CRL-2108	mouse	P+	
F9	CRL-1720	mouse	P+	
M2-10B4	CRL-1972	mouse	P+	
PFHR 9	CRL-2423	mouse	P+	
L2-RYC	CRL-2180	rat	P+	
NMU	CRL-1743	rat	P+	
Procollagen, type XVIII, alpha 1: **Col18a1, 12822**				
EOMA	CRL-2586	mouse	P+	
Collagenase (ten collagenases)				
HIG-82	CRL-1832	rabbit	P+	
Colon antigen 3				
DLD-1	CCL-221	human	P+	
Colon specific antigen (CSAp)				
SW948	CCL-237	human	P+	
WiDr	CCL-218	human	P+	
Colonic mucin glycoprotein. *See* Mucin 1.				
Colony stimulating activity (CSA)				
GCT	TIB-223	human	P+	
Colony stimulating factor 1 (macrophage): **CSF1, 1435**				
HS-5	CRL-11882†	human	P+	
MIA PaCa-2	CRL-1420	human	P+	
SK-N-SH	HTB-11	human	P+	
5/9 m α3-18	CRL-10154†	Chinese hamster	P+ (human)	
F1A3-23	HB-8207†	mouse/mouse	MAb	Anti human CSF-I
F18 AF1	HB-8208†	mouse/mouse	MAb	Anti human CSF-I
Colony stimulating factor 1 (macrophage): **Csf1, 12977**				
LADMAC	CRL-2420	mouse	P+	
SR-4987	CRL-2028	mouse	P+	
Colony stimulating factor 1 receptor, formerly McDonough feline sarcoma viral (v-*fms*) oncogene homolog: **CSF1R, 1436**				
DMS 79	CRL-2049	human	O–	v-*fms*
MSTO-211H	CRL-2081	human	O–	v-*fms*
NCI-H146	HTB-173	human	O+	v-*fms*
NCI-H526	CRL-5811	human	O+	
NCI-H69	HTB-119	human	O+	v-*fms*
NCI-H82	HTB-175	human	O+	v-*fms*
NCI-N417	CRL-5809	human	O+	
Colony stimulating factor 1 receptor: **Csf1r, 12978**				
EOC 13.31	CRL-2468	mouse	A+, R+	Dependent
EOC 2	CRL-2467	mouse	A+, R+	Dependent
EOC 20	CRL-2469	mouse	A+, R+	Dependent
I-11.15	CRL-2470	mouse	A+, R+	Dependent
I-13.35	CRL-2471	mouse	A+, R+	Dependent
Colony stimulating factor 2 (granulocyte-macrophage): **CSF2, 1437**				
HS-5	CRL-11882†	human	P+	
Mo	CRL-8066†	human	P+	
SW480	CCL-228	human	P+	
TALL-104	CRL-11386†	human	P+	
VA-ES-BJ	CRL-2138	human	P+	
BVD2-23B6.4	HB-9568†	rat/mouse	MAb	Anti human GM-CSF
BVD2-21C11.3	HB-9569†	rat/mouse	MAb	Anti human GM-CSF
Colony stimulating factor 3 (granulocyte): **CSF3, 1440**				
HS-5	CRL-11882†	human	P+	
Colony stimulating factor 3 (granulocyte) (species not yet curated)				
ConA-B1-VICK	CRL-12357†	chicken	P+	
Con A-C1-VICK	CRL-12135†	chicken	P+	
Complement				

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Genes and Bioactive Compounds

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
CA46	CRL-1648	human	R+	
CESS	TIB-190	human	R+	
Clone 15 HL-60	CRL-1964	human	R+	
Daudi	CCL-213	human	R+	
HL-60	CCL-240	human	R+	
MC116	CRL-1649	human	R–	
ST486	CRL-1647	human	R+	
MH_1C_1	CCL-144	rat	P+	Components
Complement (C4)				
C3A	CRL-10741†	human	P+	
Hep G2	HB-8065†	human	P+	
Complement component 1, q subcomponent, receptor 1: **C1qr1, 17064**				
LADMAC	CRL-2420	mouse	R+	
Complement component 1, q subcomponent, alpha polypeptide: **C1QA, 712** OR beta polypeptide: **C1QB, 713** OR gamma polypeptide: **C1QG, 714**				
12A5B7	HB-8328†	mouse/mouse	MAb	Anti human complement C1q
4A4B11	HB-8327†	mouse/mouse	MAb	Anti human complement C1q
Complement component 3a receptor 1: **C3AR1, 719**				
DMS 114	CRL-2066	human	R+	
DMS 153	CRL-2064	human	R+	
GDM-1	CRL-2627	human	R+	
U-937	CRL-1593.2	human	R+	
Complement component 3a receptor 1: **C3ar1, 12267**				
IC-21	TIB-186	mouse	R+	
J774A.1	TIB-67	mouse	R+	
RAW264.7γNO(-)	CRL-2278	mouse	R+	
$P388D_1$	TIB-63	mouse	R+	
PU5-1.8	TIB-61	mouse	R+	
RAW 264.7	TIB-71	mouse	R+	
WEHI-3	TIB-68	mouse	R+	
WR19M.1	TIB-70	mouse	R+	
5C6 Clone 1	CRL-1969	rat/mouse	MAb	Anti mouse type 3 complement receptor
Complement component 3a receptor 1: **C3ar1, 84007**				
EGC/PK060399egfr	CRL-2690	rat	R–	
Complement component (3b/4b) receptor 1, including Knops blood group system: **CR1, 1378**				
Hep 3B2.1-7	HB-8064†	human	P+	
MC/CAR	CRL-8083†	human	R+	
THP-1	TIB-202	human	R+	
35.6	CRL-10052†	Chinese hamster	P+ (human)	
Mab 543	HB-8592†	mouse/mouse	MAb	Anti human C3b, CD35
Complement component (3d/Epstein Barr virus) receptor 2: **CR2, 1380**				
29SR	CRL-2262	human	A–	
BC-3	CRL-2277	human	A–	
DB	CRL-2289	human	A–	
Farage	CRL-2630	human	A+	
HT	CRL-2260	human	A+	
RL	CRL-2261	human	A+	
THB-5	HB-135	mouse/mouse	MAb	Anti human CD21
Complement component receptor 2: **CR2, 280754**				
CC51	HB-271	mouse/mouse	MAb	Anti bovine CD21 (BoCD21)
Corticotropin releasing hormone: **CRH, 1392**				
COLO 320DM	CCL-220	human	P+	
COLO 320HSR	CCl-220.1	human	P+	
DMS 114	CRL-2066	human	P+	
DMS 153	CRL-2064	human	P+	
DMS 53	CRL-2062	human	P+	
DMS 79	CRL-2049	human	P+	
Corticotropin releasing hormone: **Crh, 12918**				
AtT-20	CCL-89	mouse	P+	
AtT-20/D16v-F2	CRL-1795	mouse	P+	

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Corticotropin releasing hormone: **Crh, 81648**				
RC-4B/C	CRL-1903	rat	P+	
Cortisol (steroid)				
NCI-H295R	CRL-2128	human	P+	
Coxsackie virus and adenovirus receptor: **CXADR, 1525**				
RmcB	CRL-2379	mouse/mouse	MAb	Anti human CAR
CR1 *See* Complement component (3b/4b) receptor 1.				
c-*raf*-1. *See* v-*raf*-1 murine leukemia viral oncogene homolog 1.				
CRALBP: Cellular retinaldehyde-binding protein 1. *See* Retinaldehyde binding protein 1.				
Creatine kinase, brain: **CKB, 1152**				
NCI-H146	HTB-173	human	P+	
NCI-H187	CRL-5804	human	P+	
NCI-H209	HTB-172	human	P+	
NCI-H345	HTB-180	human	P+	
NCI-H378	CRL-5808	human	P+	
NCI-H446	HTB-171	human	P+	
NCI-H526	CRL-5811	human	P+	
NCI-H82	HTB-175	human	P+	
NCI-N417	CRL-5809	human	P+	
Creatine kinase, brain: **CKB, 1152** AND muscle: **CKM** [dimer], **1158**				
CKMM 14.15	HB-9419†	rat/mouse	MAb	Anti human CK-MM and CK-MB
Creatine kinase, muscle: **CKM, 1158**				
CKMM 14.52	HB-9421†	rat/mouse	MAb	Anti human CK-MM
CKMM 14.5	HB-9420†	rat/mouse	MAb	Anti human CK-MM
Creatine kinase, muscle (species not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Creatine phosphokinase (CPK)				
BC_3H1	CRL-1443	mouse	P+	
A-10	CRL-1476	rat	P+	
A7r5	CRL-1444	rat	P+	
H9c2(2-1)	CRL-1446	rat	P+	
L8	CRL-1769	rat	P+	
Crystallin, beta and gamma (five beta and six gamma crystallins)				
B-3	CRL-11421†	human	P+	
CTLA-4. *See* Cytotoxic T-lymphocyte-associated protein 4.				
Cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4): **CDKN2A, 1029**				
LN-18	CRL-2610	human	O–	p14ARF– (deleted) and p16– (deleted)
LN-229	CRL-2611	human	O–	p14ARF– (deleted) and p16– (deleted)
Cyclin-dependent kinase inhibitor 2A: **Cdkn2a, 12578**				
p53NiS1	CRL-2619	mouse	O–	p16–; p19ARF+
Cystic fibrosis transmembrane conductance regulator, ATP-binding cassette (sub-family C, member 7): **CFTR, 1080**				
BxPC-3	CRL-1687	human		CFTR–
Capan-1	HTB-79	human		CFTR+
CFPAC-1	CRL-1918	human		CFTR+
NCI-H146	HTB-173	human		mRNA CFTR+
NCI-H345	HTB-180	human		mRNA CFTR+
NCI-H727	CRL-5815	human		mRNA CFTR+
mAb 13-1	HB-10565†	mouse/mouse	MAb	Anti human CFTR
mAB 24-2	HB-11946†	mouse/mouse	MAb	Anti human CFTR
mAB 24-1	HB-11947†	mouse/mouse	MAb	Anti human CFTR
Cystic fibrosis transmembrane conductance regulator: **Cftr, 24255**				
DSL-6A/C1	CRL-2132	rat		CFTR+
Cytochrome P450 (CYP) (106 family members)				
PLHC-1	CRL-2406	topminnow	P+	
Cytochrome P450, 1a1: **Cyp1a1, 24296**				
H-4-II-E	CRL-1548	rat	P+	Inducible
Cytochrome P450, 1a1 (species not yet curated)				
ZFL	CRL-2643	zebrafish	P+	Inducible
Cytochrome P450IA1				
BpRcl	CRL-2217	mouse	P+	

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Hepa-1c1c7	CRL-2026	mouse	P+	
tao BpRcl	CRL-2218	mouse	P+	
Cytokeratin 7 (CK7). *See* Keratin 7.				
Cytokeratin 8 (CK8). *See* Keratin 8.				
Cytokeratin 10 (CK10). *See* Keratin 10.				
Cytokeratin 11 (CK11). *See* Keratin 11.				
Cytokeratin 14 (CK14). *See* Keratin 14.				
Cytokeratin 18 (CK18). *See* Keratin 18.				
Cytokeratin 19 (CK19). *See* Keratin 19.				
Cytotoxic T-lymphocyte-associated protein 4: **CTLA4, 1493**				
A3.6B10	HB-12318†	mouse/mouse	MAb	Anti human CTLA-4 (CD152)
A3.4H2	HB-12319†	mouse/mouse	MAb	Anti human CTLA-4 (CD152)
DEC-205. *See* Lymphocyte antigen 75.				
Deoxynucleotidyltransferase, terminal: **DNTT, 1791**				
70Z/3	TIB-158	human	P–	
Farage	CRL-2630	human	P–	
HuT 102	TIB-162	human	P–	
Loucy	CRL-2629	human	P–	
MOLT-3	CRL-1552	human	P+	
MOLT-4	CRL-1582	human	P+	
RS4	CRL-1873	human	P+	
Desmin: **Des, 13346**				
WR21	CRL-2189	mouse	P–	
Desmin: **Des, 64362**				
EGC/PK060399egfr	CRL-2690	rat	P–	
RL-65	CRL-10354†	rat	P+	
RMC	CRL-2573	rat	P+	
Desmin (species not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Dihydrotestosterone receptor. *See* Androgen receptor.				
DNA polymerase alpha. *See* Polymerase, alpha.				
Dopa decarboxylase (aromatic L-amino acid decarboxylase): **DDC, 1644**				
A549	CCL-185	human	P–	
MSTO-211H	CRL-2081	human	P–	
NCI-H128	HTB-120	human	P+	
NCI-H146	HTB-173	human	P+	
NCI-H187	CRL-5804	human	P+	
NCI-H209	HTB-172	human	P+	
NCI-H23	CRL-5800	human	P–	
NCI-H28	CRL-5820	human	P–	
NCI-H292	CRL-1848	human	P–	
NCI-H345	HTB-180	human	P+	
NCI-H378	CRL-5808	human	P+	
NCI-H446	HTB-171	human	P–	
NCI-H510A	HTB-184	human	P+	
NCI-H526	CRL-5811	human	P–	
NCI-H548	CCL-249	human	P+	
NCI-H60	CRL-5821	human	P+	
NCI-H660	CRL-5813	human	P+	
NCI-H69	HTB-119	human	P+	
NCI-H716	CCL-251	human	P+	
NCI-H747	CCL-252	human	P–	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
NCI-N87	CRL-5822	human	P–	
SNU-1	CRL-5971	human	P–	
SNU-5	CRL-5973	human	P+	
SNU-16	CRL-5974	human	P+	
SHP-77	CRL-2195	human	P+	
SNU-C2A	CCL-250.1	human	P+	

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Dopa decarboxylase (aromatic L-amino acid decarboxylase): **Ddc, 24311**				
RIN-14B	CRL-2059	rat	P+	
RIN-5F	CRL-2058	rat	P+	
RIN-m	CRL-2057	rat	P+	
RIN-m5F	CRL-11605†	rat	P+	
DNA polymerase epsilon. *See* Polymerase, epsilon.				
Dopamine				
PC-12	CRL-1721	rat	P+	
Dopamine beta-hydroxylase (dopamine beta-monooxygenase): **DBH, 1621**				
MC-IXC	CRL-2270	human	P–	
SH-SY5Y	CRL-2266	human	P+	
SK-N-BE(2)	CRL-2271	human	P+	
SK-N-MC	HTB-10	human	P+	
SK-N-SH	HTB-11	human	P+	
Dopamine beta-hydroxylase: **Dbh, 13166**				
CATH.a	CRL-11179†	mouse	P+	
Dopamine 1A receptor: **Dr1a, 24316** OR receptor D2: **Drd2, 24318** OR receptor D3: **Drd3, 29238** OR receptor D4: **Drd4, 25432** OR receptor D5: **Drd5, 25195**				
MMQ	CRL-10609†	rat	R+	
Dopamine receptor D2: **DRD2, 1813**				
A9 L hD2 S.C. 18	CRL-10225†	mouse	R+ (human)	
DPC4. *See* MAD, mothers against decapentaplegic homolog 4.				
E6/E7				
CCD 1102 KERTr	CRL-2310	human	O+	
CCD 1103 KIDTr	CRL-2304	human	O+	
CCD 1105 KIDTr	CRL-2305	human	O+	
CCD 1106 KERTr	CRL-2309	human	O+	
Ectonucleotide pyrophosphatase/phosphodiesterase 1: **ENPP1, 5167**				
NCI-H929	CRL-9068†	human	A+	
Ectonucleoside triphosphate diphosphohydrolase 1: **ENTPD1, 953**				
Farage	CRL-2630	human	A+	
Toledo	CRL-2631	human	A–	
Pfeiffer	CRL-2632	human	A–	
EGF-like module-containing, mucin-like, hormone receptor-like sequence 1: **Emr1, 13733**				
C8-B4	CRL-2540	mouse	A+	
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+/–	
PMJ2-PC	CRL-2457	mouse	A+	
PMJ2-R	CRL-2458	mouse	A+	
F4/80	HB-198	rat/mouse	MAb	Anti mouse macrophage
ELAM-1. *See* Selectin E.				
Endorphin, beta. *See* Proopiomelanocortin.				
Endostatin. *See* Collagen, type XVIII.				
Endothelial leukocyte adhesion molecule 1. *See* Selectin E.				
Enkephalin. *See* Preproenkephalin 1.				
Enolase 2, (gamma, neuronal): **ENO2, 2026**				
D283 Med	HTB-185	human	P+	
D341 Med	HTB-187	human	P+	
DBTRG-05MG	CRL-2020	human	P+	
HCN-1A	CRL-10442†	human	P+	
HCN-2	CRL-10742†	human	P+	
MSTO-211H	CRL-2081	human	P+	
NCI-H187	CRL-5804	human	P+	
NCI-H378	CRL-5808	human	P+	
NCI-N417	CRL-5809	human	P+	
NCI-H526	CRL-5811	human	P+	
PFSK-1	CRL-2060	human	P+	

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Eosinophil cationic protein (ECP). *See* Ribonuclease, RNase A family 3.				
Eosinophil derived neurotoxin (EDN). *See* Ribonuclease, RNase A family 2.				
Eosinophil major basic protein (MBP). *See* Proteoglycan 2, bone marrow.				
Eosinophil peroxidase: **EPX, 8288**				
Clone 15 HL-60	CRL-1964	human	P+	
Epidermal growth factor receptor (erythroblastic leukemia viral (v-*erb*-b) oncogene homolog, avian): **EGFR , 1956**				
AU565	CRL-2351	human	R+	
C2BBe1	CRL-2102	human	R+	
Caco-2	HTB-37	human	R+	
DBTRG-05MG	CRL-2020	human	R+	
DMS 114	CRL-2066	human	R+	
DMS 153	CRL-2064	human	R+	
DMS 53	CRL-2062	human	R+	
DMS 79	CRL-2049	human	R+	
FHs 74 Int	CCL-241	human	R+	
G-292, clone A141B1	CRL-1423	human	R+	
HEPM	CRL-1486	human	R+	Responsive
HK-2	CRL-2190	human	R+	Dependent on EGF
HPAC	CRL-2119	human	R+	Responsive
Hs 578Bst	HTB-125	human	R+	
MCF-10-2A	CRL-10781†	human	R+	
MCF 10F	CRL-10318†	human	R+	Responsive
MDA-MB-231	HTB-26	human	R+	
MDA-MB-330	HTB-127	human	R+	
MDA-MB-468	HTB-132	human	R+	
NCI-H23	CRL-5800	human	R+	
NCI-H661	HTB-183	human	R–	
NCI-H69	HTB-119	human	R–	
NCI-H727	CRL-5815	human	R+	Growth inhibited by EGF receptor antibodies.
NCI-H82	HTB-175	human	R–	
NCI-N417	CRL-5809	human	R+	Expresses the EGF receptor and EGF receptor mRNA
Saos-2	HTB-85	human	R+	
SNU-C2B	CCL-250	human	R+	
SW480	CCL-228	human	R+	
WiDr	CCL-218	human	R+	
EGC/PK060399egfr	CRL-2690	rat	R+ (human)	
225	HB-8508†	mouse/mouse	MAb	Anti human EGF receptor
455	HB-8507†	mouse/mouse	MAb	Anti human EGF receptor
528	HB-8509†	mouse/mouse	MAb	Anti human EGF receptor
579	HB-8506†	mouse/mouse	MAb	Anti human EGF receptor
Mab 108	HB-9764†	mouse/mouse	MAb	Anti human EGF receptor
Mab 9	HB-9763†	mouse/mouse	MAb	Anti human EGF receptor
Epidermal growth factor receptor: **Egfr, 13649**				
TM3	CRL-1714	mouse	R+	
Epidermal growth factor receptor: **Egfr, 24329**				
FAT 7	CRL-2109	rat	R+	
NRK-49F	CRL-1570	rat	R+	
NRK-52E	CRL-1571	rat	R+	
Epidermal growth factor receptor (species not yet curated)				
12MBr6	CRL-1576	African green monkey	R+	Dependent on EGF
4MBr-5	CCL-208	Rhesus monkey	R+	Dependent on EGF
Epidermal growth factor: **Egf, 13645**				
SCA-9 clone 15	CRL-1734	mouse	P+	
Epithelial membrane antigen (EMA). *See* Mucin 1, transmembrane.				
Epithelial specific antigen				
CCD 1102 KERTr	CRL-2310	human	A+	
CCD 1106 KERTr	CRL-2309	human	A+	
Epstein-Barr nuclear antigen 1 (EBNA-1)				
CV-1/EBNA-1	CRL-10478†	African green monkey	P+	

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Epstein-Barr virus (EBV)				
1A2	CRL-8119†	human	P+	
CESS	TIB-190	human	P+	
E.H. IV (Elaine IV)	CCL-104	human	P+	
Jiyoye	CCL-87	human	P+	
RPMI 7666	CCL-114	human	P+	
72A1	HB-168	mouse/mouse	MAb	Anti EBV
Epstein-Barr virus (EBV) receptor. *See* Complement component (3d/Epstein Barr virus) receptor 2.				
v-*erb*-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian): **ERBB2, 2064**				
AU565	CRL-2351	human	O+	her2/*neu*; overexpressed
HCC1008	CRL-2320	human	O+	her2/*neu*
HCC1143	CRL-2321	human	O–	her2/*neu*
HCC1187	CRL-2322	human	O–	her2/*neu*
HCC1395	CRL-2324	human	O–	her2/*neu*
HCC1419	CRL-2326	human	O+	her2/*neu*; overexpressed
HCC1428	CRL-2327	human	O–	her2/*neu*
HCC1500	CRL-2329	human	O–	her2/*neu*
HCC1569	CRL-2330	human	O+	her2/*neu*
HCC1599	CRL-2331	human	O–	her2/*neu*
HCC1806	CRL-2335	human	O–	her2/*neu*
HCC1937	CRL-2336	human	O–	her2/*neu*
HCC1954	CRL-2338	human	O+	her2/*neu*; overexpressed
HCC202	CRL-2316	human	O+	her2/*neu*
HCC2157	CRL-2340	human	O+	her2/*neu*
HCC2218	CRL-2343	human	O+	her2/*neu*
HCC38	CRL-2314	human	O–	her2/*neu*
HCC70	CRL-2315	human	O–	her2/*neu*
MSTO-211H	CRL-2081	human	O+	v-*erb* B
NCI-H23	CRL-5800	human	O+	v-*erb* B
NCI-N87	CRL-5822	human	O+	c-*erb*-B2
SNU-1	CRL-5971	human	O+	c-*erb*-B2
SNU-16	CRL-5974	human	O+	c-*erb*-B2
SNU-5	CRL-5973	human	O+	c-*erb*-B2
OV-90	CRL-11732†	human	O+	her2/*neu*
SK-BR-3	HTB-30	human	O+	HER2/c-*erb*-2; overexpresses
TOV-112D	CRL-11731†	human	O+	her2/*neu*
UACC-812	CRL-1897	human	O+	her2/*neu*; 15-fold amplification
UACC-893	CRL-1902	human	O+	her2/*neu*; 20-fold amplification
EGC/PK060399egfr	CRL-2690	rat	O+ (human)	
171-11B9	CRL-2661	mouse/mouse synthetic	MAb	Anti erb B (v-*erb*-B) oncogene peptide,
172-12A4	CRL-2660	mouse/mouse synthetic	MAb	Anti erb B (v-*erb*-B) oncogene peptide,
20.3 [TAb 250]	CRL-2655	mouse/mouse	MAb	Anti human c-*erb*-B2 protein
Ab 21.1	HB-11601†	mouse/mouse	MAb	Anti human *erb*-B2 protein
Ab 23.1	HB-11602†	mouse/mouse	MAb	Anti human *erb*-B2 protein
A-HER2	CRL-10463†	mouse/mouse	MAb	Anti HER2 receptor
v-*erb*-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian): **Erbb2 , 13866**				
B104-1-1	CRL-1887	mouse	O+	*neu*
Erythropoietin: **EPO, 2056**				
5F12 AD3	HB-8209†	mouse/mouse	MAb	Anti EPO
BF-11	CRL-8164†	rat/mouse	MAb	Anti human EPO
E-selectin. *See* Selectin E.				
Estradiol				
BeWo	CCL-98	human	P+	
ChaGo-K-1	HTB-186	human	P+	
17 beta Estradiol				
DMS 114	CRL-2066	human	P+	
DMS 153	CRL-2064	human	P+	
DMS 53	CRL-2062	human	P+	
DMS 79	CRL-2049	human	P+	

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Estriol				
BeWo	CCL-98	human	P+	
Estrogen				
BeWo	CCL-98	human	P+	
JAR	HTB-144	human	P+	
Estrogen (estradiol and others)				
LC-540	CCL-43	rat	P+	
Estrogen receptor 1: **ESR1, 2099**				
Capan-1	HTB-79	human	R+	ER alpha
Estrogen receptor 1: **ESR1, 2099** OR receptor 2 (ER beta): **ESR2, 2100**				
BT-20	HTB-19	human	R–	
HCC1008	CRL-2320	human	R–	
HCC1143	CRL-2321	human	R–	
HCC1395	CRL-2324	human	R+	
HCC1419	CRL-2326	human	R–	
HCC1500	CRL-2329	human	R+	
HCC1569	CRL-2330	human	R–	
HCC1599	CRL-2331	human	R–	
HCC1806	CRL-2335	human	R–	
HCC1937	CRL-2336	human	R–	
HCC1954	CRL-2338	human	R–	
HCC202	CRL-2316	human	R–	
HCC2157	CRL-2340	human	R–	
HCC2218	CRL-2343	human	R–	
HCC38	CRL-2314	human	R–	
HCC70	CRL-2315	human	R+	
Hs 578Bst	HTB-125	human	R–	
Hs 578T	HTB-126	human	R–	
LNCaP clone FGC	CRL-1740	human	R+	
MCF7	HTB-22	human	R+	
NIH:OVCAR-3	HTB-161	human	R+	
RL95-2	CRL-1671	human	R+	
T-47D	HTB-133	human	R+	
UACC-812	CRL-1897	human	R–	
UACC-893	CRL-1902	human	R–	
ZR-75-1	CRL-1500	human	R+	
Estrogen receptor 1 (alpha): **Esr1: 13982** OR receptor 2 (beta): **Esr2: 13983**				
TM3	CRL-1714	mouse	R+	
TM4	CRL-1715	mouse	R+	
Estrogen receptor (species not yet curated)				
LMH	CRL-2117	chicken	R+	Expresses low level
LMH/2A	CRL-2118	chicken	R+	Responsive; expresses high levels
Estrone				
BeWo	CCL-98	human	P+	
Exocrine enzymes				
AR42J	CRL-1492	rat	P+	
ARIP	CRL-1674	rat	P+	Low levels
Extracellular matrix (ECM) proteins				
BCE C/D-1b	CRL-2048	bovine	P+	
F4/80. *See* EGF-like module.				
Factor VIII. *See* Coagulation factor VIII.				
Farnesyltransferase, CAAX box, alpha: **FNTA, 2339**				
IgG-IB7	CRL-2418	mouse/mouse	MAb	Anti alpha subunit of farnesyltransferase
Fas. *See* Tumor necrosis factor receptor superfamily, member 6.				
FcERI (Fc of IgE)				
10P12	CRL-2036	mouse	R+	FcERI (Fc of IgE)
10P2	CRL-2034	mouse	R+	FcERI (Fc of IgE)
11P0-1	CRL-2037	mouse	R+	FcERI (Fc of IgE)

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FcERI (Fc of IgE) continued				
MC/9	CRL-8306†	mouse	R+	FcERI (Fc of IgE)
RBL-1	CRL-1378	rat	R+	FcERI (Fc of IgE)
RBL-2H3	CRL-2256	rat	R+	FcERI (Fc of IgE)
Fc fragment of IgA, receptor for: **FCAR, 2204**				
My 43.51	HB-12128†	mouse/mouse	MAb	Anti human Fc receptor for IgA
Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide: **FCER1G, 2207**				
CT6-1D7	CRL-2438	mouse/mouse	MAb	Anti human Fc receptor for IgG
Fc fragment of IgE, low affinity II, receptor for (CD23A): **FCER2, 2208**				
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
Pfeiffer	CRL-2632	human	A–	
Ramos (RA 1)	CRL-1596	human	A+, R+	Responsive
Ramos.2G6.4C10	CRL-1923	human	A+, R+	Responsive
Farage	CRL-2630	human	A–	
Toledo	CRL-2631	human	A–	
Fc fragment of IgG, high affinity Ia, receptor for (CD64): **FCGR1A, 2209**				
32.2	HB-9469†	mouse/mouse	MAb	Anti human monocyte Fc receptor (high affinity, FcRI)
Fc fragment of IgG, low affinity IIa, receptor for (CD32): **FCGR2A, 2212** OR low affinity IIb, receptor for (CD32): **FCGR2B, 2213**				
IV.3	HB-217	mouse/mouse	MAb	Anti human CD32
Fc fragment of IgG, low affinity IIIa, receptor for (CD16): **FCGR3A , 2214** OR low affinity IIIb, receptor for (CD16): **FCGR3B, 2215**				
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
TALL-104	CRL-11386†	human	A–	
Fc receptor, IgG, low affinity IIb: **Fcgr2b, 14130**				
NFS-25 C-3	CRL-1695	mouse	A+	
NFS-5 C-1	CRL-1693	mouse	A+	
NFS-70 C-10	CRL-1694	mouse	A+	
Fc receptor, IgG, low affinity III (mouse): **Fcgr3, 14131**				
2.4G2	HB-197	rat/mouse	MAb	Anti mouse Fc gamma receptor
Fc receptor (FcR) (32 Fc receptors)				
AMJ2-C11	CRL-2456	mouse	A+	
AMJ2-C8	CRL-2455	mouse	A+	
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
PMJ2-PC	CRL-2457	mouse	A+	
PMJ2-R	CRL-2458	mouse	A+	
Fc rat heavy chain heterodimers				
1G3	CRL-2434	mouse/mouse	MAb	Anti FcRn heavy chain heterodimers
2G3	CRL-2435	mouse/mouse	MAb	Anti FcRn heavy chain heterodimers
Feline sarcoma oncogene: **FES, 2242**				
DMS 79	CRL-2049	human	O–	v-*fes*
MSTO-211H	CRL-2081	human	O–	v-*fes*
NCI-H146	HTB-173	human	O–	
NCI-H526	CRL-5811	human	O+	
NCI-H69	HTB-119	human	O+	v-*fes*
NCI-H82	HTB-175	human	O+	v-*fes*
NCI-N417	CRL-5809	human	O+	
C166	CRL-2581	mouse	O+ (human)	*fes* (fps/fes)
Fetoprotein, alpha. *See* Alpha-fetoprotein.				
Fibrinogen (six fibrinogens)				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
F45J	HB-9740†	mouse/mouse	MAb	Anti human fibrinogen

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Genes and Bioactive Compounds

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Fibroblast growth factor receptor 1 (fms-related tyrosine kinase 2, Pfeiffer syndrome): **FGFR1, 2260** OR receptor 2 (bacteria-expressed kinase, keratinocyte growth factor receptor, craniofacial dysostosis 1, Crouzon syndrome, Pfeiffer syndrome, Jackson-Weiss syndrome): **FGFR2, 2263** OR receptor 3 (achondroplasia, thanatophoric dwarfism): **FGFR3, 2261** OR receptor 4: **FGFR4. 2264**				
MDA-MB-134-VI	HTB-23	human	R+	Overexpresses
MDA-MB-453	HTB-131	human	R+	Overexpresses
Fibronectin 1: **FN1, 2335**				
HK-2	CRL-2190	human	P+	
LN-18	CRL-2610	human	P+	
FHCR-1-2813/FDC-6	HB-9018†	mouse/mouse	MAb	Anti human fibronectin
HFN 36.3	CRL-1605	mouse/mouse	MAb	Anti human fibronectin
HFN 7.1	CRL-1606	mouse/mouse	MAb	Anti human fibronectin
P_3NP/PFn	HB-91	mouse/mouse	MAb	Anti human fibronectin
Fibronectin 1: **Fn1, 14268**				
NE	CRL-2070	mouse	P+	
WR21	CRL-2189	mouse	P+	
Fibronectin 1: **Fn1, 25661**				
RL-65	CRL-10354†	rat	P+	
Fibronectin 1 (species not yet curated)				
RF/6A	CRL-1780	Rhesus monkey	P+	
Filamin A, alpha (actin binding protein 280): **FLNA, 2316** OR B, beta (actin binding protein 278): **FLNB, 2317** OR C, gamma (actin binding protein 280): **FLNC, 2318**				
A7	CRL-2500	human	P+	
FK506 binding protein 5: **FKBP5, 2289** (human; monkey gene not yet curated)				
GSML	CRL-2699	Guyanese squirrel monkey	P+	Elevated expression
Flk-1/KDR. *See* Kinase insert domain receptor.				
fms. *See* Colony stimulating factor 1 receptor.				
Follicle stimulating hormone receptor: **FSHR, 2492**				
FSHR-18	CRL-2688	mouse/mouse	MAb	Anti human FSH
FSHR-323	CRL-2689	mouse/mouse	MAb	Anti human FSH
Follicle stimulating hormone receptor: **Fshr, 14309**				
TM4	CRL-1715	mouse	R+	Responsive
Follicle stimulating hormone, beta polypeptide: **FSHB, 2488**				
HP75	CRL-2506	human	P+	
Follicle stimulating hormone, subunit beta: **Fshb, 25447**				
RC-4B/C	CRL-1903	rat	P+	
v-*fos* FBJ murine osteosarcoma viral oncogene homolog: **FOS, 2353**				
COLO 201	CCL-224	human	O+	
DLD-1	CCL-221	human	O+	
HEC-1-A	HTB-112	human	O+	c-*fos*
HT-29	HTB-38	human	O+	
LoVo	CCL-229	human	O+	
LS 174T	CL-188	human	O+	
MSTO-211H	CRL-2081	human	O–	c-*fos*
SK-CO-1	HTB-39	human	O+	
SW1116	CCL-233	human	O+	
SW1417	CCL-238	human	O+	
SW480	CCL-228	human	O+	
SW620	CCL-227	human	O+	
SW948	CCL-237	human	O+	
411-14E10	CRL-2663	mouse/mouse	MAb	Anti *fos* oncogene peptide, synthetic
413-15D12	CRL-2653	mouse/mouse	MAb	Anti *fos* oncogene peptide, synthetic
Fragile histidine triad gene: **FHIT, 2272**				
HCC1428	CRL-2327	human	P–	Homozygous deletion
HCC1428 BL	CRL-2328	human	P–	Homozygous deletion
HCC1569	CRL-2330	human	P+	Mutated
HCC1806	CRL-2335	human	P–	Homozygous deletion

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Genes and Bioactive Compounds

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Fragile X mental retardation 1: **FMR1, 2332**				
C13589	CRL-2704	human		Mutated; 31 and 59 CGG-triplet repeats
Fyn proto-oncogene: **Fyn, 14360**				
SYF	CRL-2459	mouse	O–	
Galactosidase, beta1: **Glb1, 12091**				
CT26.CL25	CRL-2639	mouse	P+	
Galactosidase, beta1: **Glb1, 24395**				
9L/lacZ	CRL-2200	rat	P+	
C6/LacZ	CRL-2199	rat	P+	
C6/lacZ7	CRL-2303	rat	P+	
Gamma-aminobutyric acid-A receptor (GABA-A, Type 1 BzR) (eight type-1 receptors)				
CMVα1 WSS-1	CRL-2029	human	R+ (rat)	
Gamma-glutamyltransferase 1: **GGT1, 2678** OR glutamyltransferase 2: **GGT2, 2679**				
HK-2	CRL-2190	human	P+	
Gelatinase				
HIG-82	CRL-1832	rabbit	P+	
Glioma-associated oncogene homolog (zinc finger protein): **GLI, 2735**				
SJRH30	CRL-2061	human	O+	Amplified 30 fold
SJSA-1	CRL-2098	human	O+	Amplified 15 fold
Glial fibrillary acidic protein: **GFAP, 2670**				
CCF-STTG1	CRL-1718	human	P+	
D283 Med	HTB-185	human	P–	
D341 Med	HTB-187	human	P–	
Daoy	HTB-186	human	P–	
DBTRG-05MG	CRL-2020	human	P–	
HCN-1A	CRL-10442†	human	P–	
LN-18	CRL-2610	human	P+	
M059J	CRL-2366	human	P–	
M059K	CRL-2365	human	P–	
SVG p12	CRL-8621†	human	P+	
Glial fibrillary acidic protein: **Gfap, 14580**				
C8-D1A	CRL-2541	mouse	P+	
C8-D30	CRL-2534	mouse	P+	
C8-S	CRL-2535	mouse	P+	
Swiss SFME	CRL-9391†	mouse	P+	
Glial fibrillary acidic protein: **Gfap, 24387**				
CTX TNA2	CRL-2006	rat	P+	
DI TNC_1	CRL-2005	rat	P+	
EGC/PK060399egfr	CRL-2690	rat	P+	
Glucagon: **GCG, 2641**				
DMS 114	CRL-2066	human	P+	
DMS 53	CRL-2062	human	P+	
Glucagon: **Gcg, 14526**				
αTC1 Clone 9	CRL-2350	mouse	P+	
B-TC-6	CRL-11506†	mouse	P+	
NIT-1	CRL-2055	mouse	P+/–	
Glucagon receptor: **Gcgr, 14527**				
N1E-115	CRL-2263	mouse	R+	
Glucagon receptor (species not yet curated)				
HIT-T15	CRL-1777	Syrian golden hamster	R+	Responsive
Glucocorticoid receptors. *See* Nuclear receptor subfamily 3.				
Glutamate				
C8-B4	CRL-2540	mouse	P+	
Glutamate decarboxylase 2 (pancreatic islets and brain, 65kDa): **GAD1, 2571** OR **GAD2, 2572** (human gene)				
GAD-1	HB-184	mouse/mouse	MAb	Anti GAD (many species)
Glutamyltransferase, gamma. *See* Gamma-glutamyltransferase.				

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Genes and Bioactive Compounds

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Glucose-6-phosphate dehydrogenase, autosomal: **G6pd2, 24378** OR dehydrogenase 2, mitochondrial: **Gpd2, 25062**				
C_6	CCL-107	rat	P+	
Glycogen				
FL83B	CRL-2390	mouse	P+	
Glycophorin				
HEL 92.1.7	TIB-180	human	P+	
G26.4.1C3/86	HB-9893†	mouse/mouse	MAb	Anti human glycophorin
Glycophorin A (includes MN blood group): **GYPA, 2993**				
TF-1	CRL-2003	human	P–	
10F7MN	HB-8162†	mouse/mouse type N	MAb	Anti human glycophorin A type M and
6A7M	HB-8159†	mouse/mouse	MAb	Anti human glycophorin A type M
8A2N	HB-8161†	mouse/mouse	MAb	Anti human glycophorin A type N
NN-3	HB-8474†	mouse/mouse	MAb	Anti human glycophorin A type N
NN-4	HB-8473†	mouse/mouse	MAb	Anti human glycophorin A type N
NN-5	HB-8476†	mouse/mouse	MAb	Anti human glycophorin A type N
Glycoprotein hormones, alpha polypeptide: **CGA, 1081**				
ChaGo-K-1	HTB-168	human	P+	
HP75	CRL-2506	human	P+	
TSHR-T5-51	CRL-2680	mouse/mouse	MAb	Anti human TSH receptor alpha
TSHR-R5T-44	CRL-2681	mouse/mouse	MAb	Anti human TSH receptor alpha
TSHR-T5U-317	CRL-2682	mouse/mouse	MAb	Anti human TSH receptor alpha
Chorionic gonadotropin, beta polypeptide: **CGB, 1082**				
Ca Ski	CRL-1550	human	P+	
Glycoprotein hormones, alpha polypeptide: **CGA, 1081** AND chorionic gonadotropin, beta polypeptide: **CGB, 1082**: Multimeric protein				
3A-sub E	CRL-1584	human	P+	At 40°C
3A(tPA-30-1)	CRL-1583	human	P+	At 40°C
BeWo	CCL-98	human	P+	
DMS 53	CRL-2062	human	P+	
JAR	HTB-144	human	P+	
JEG-3	HTB-36	human	P+	
MSTO-211H	CRL-2081	human	P+	
Gonadotropin-releasing hormone receptor: **Gnrhr, 81668**				
RC-4B/C	CRL-1903	rat	R+	Less than normal number
Gonadotropin-releasing hormone 1 (leutinizing-releasing hormone): **GNRH1, 2796**				
USASK/DSIL-LHRH-A	HB-9094†	mouse/mouse	MAb	Anti carboxy terminal end of gonadotropin-releasing hormone
gp39. *See* Tumor necrosis factor (ligand) superfamily, member 5.				
GPIIIa, platelet. *See* Integrin, beta 3.				
Granulocyte colony stimulating activity (CSA)				
PU5-1.8 (PU5-1R)	TIB-61	mouse	P+	
WEHI-3	TIB-68	mouse	P+	
Granulocyte colony stimulating factor (G-CSF). *See* Colony stimulating factor 3 (granulocyte).				
Granulocyte macrophage colony stimulating factor (GM-CSF). *See* Colony stimulating factor 2 (granulocyte-macrophage).				
Group-specific component (vitamin D binding protein): **GC, 2638**				
Hep 3B2.1-7	HB-8064†	human	P+	
Growth factor receptor bound protein 2-associated protein 2: **Gab2, 14389**				
Cl. $Ly1^+2^-$/9	CRL-8179†	mouse	P+	
Growth arrest and DNA-damage-inducible, alpha: **GADD45A, 1647**				
RKO-AS45-1	CRL-2579	human	P+	Overexpresses Gadd45 RNA and protein
Growth hormone 1: **GH1, 2688**				
DMS 53	CRL-2062	human	P+	
HGH-B	HB-10596†	mouse/mouse	MAb	Anti human GH
Growth hormone 1: **Gh1, 24391**				
GH_1	CCL-82	rat	P+	Somatotrophin
GH_3	CCL-82.1	rat	P+	Somatotrophin
GH_4C_1	CCL-82.2	rat	P+	Somatotrophin
RC-4B/C	CRL-1903	rat	P+	

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Growth hormone receptor: **GHR, 2690**				
IM-9	CCL-159	human	R+	
Guanylate cyclase 2C (heat stable enterotoxin receptor): **GUCY2C, 2984**				
Caco-2	HTB-37	human	R+	
Haptoglobin: **HP, 3240**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Hras1. *See ras.*				
hCG. *See* Glycoprotein hormones.				
Hemochromatosis: **HFE, 3077**				
1C3	CRL-2441	mouse/mouse	MAb	Anti human HFE
2A11	CRL-2442	mouse/mouse	MAb	Anti human HFE
2A5	CRL-2444	mouse/mouse	MAb	Anti human HFE
2B7	CRL-2443	mouse/mouse	MAb	Anti human HFE
3A5	CRL-2440	mouse/mouse	MAb	Anti human HFE
Hemoglobin				
BB88	TIB-55	mouse	P+	
D1B	TIB-56	mouse	P+	
HEL 92.1.7	TIB-180	human	P+	
Heparan sulfate proteoglycan				
EHS	CRL-2108	mouse	P+	
L2-RYC	CRL-2180	rat	P+	
Heparan sulfate proteoglycan 2 (perlecan): **Hspg2, 15530**				
PFHR 9	CRL-2423	mouse	P+	
HER2 receptor. *See erb.*				
her2/*neu*. *See erb.*				
her3				
AU565	CRL-2351	human	O+	
her4				
AU565	CRL-2351	human	O+	
Histamine				
MC/9	CRL-8306†	mouse	P+	
RBL-1	CRL-1378	rat	P+	
RBL-2H3	CRL-2256	rat	P+	
Histamine receptor H 1: **Hrh1, 15465**				
N1E-115	CRL-2263	mouse	R+	
Hle-1				
29SR	CRL-2262	human	A+	
DB	CRL-2289	human	A+	
HT	CRL-2260	human	A+	
RL	CRL-2261	human	A+	
HMG-CoA reductase. *See* 3-hydroxy-3-methylglutaryl-Coenzyme A reductase.				
HNK-1. *See* CD57.				
HSA				
AKR1.G.1.OVA^{R}.1.26	TIB-232	mouse	A+	
H-Y				
TM4	CRL-1715	mouse	A+, P+	
HY3-11.27	HB-8116†	mouse/mouse	MAb	Anti mammalian H-Y antigen
12/44	HB-9070†	mouse/mouse	MAb	Anti mouse and human H-Y antigen
12/49	HB-9071†	mouse/mouse	MAb	Anti mouse and human H-Y antigen
Hyaluronic acid				
3T6-Swiss albino	CCL-96	mouse	P+	
3-Hydroxy-3-methylglutaryl-Coenzyme A reductase: **Hmgcr, 25675**				
A9	CRL-1811	mouse/mouse	MAb	Anti hamster and rat HMG-CoA reductase
5-Hydroxytryptamine (serotonin) 1D beta (5HT1Dbeta).				
Ltk-11	CRL-10422†	mouse	R+ (human)	

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Genes and Bioactive Compounds

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5-Hydroxytryptamine (serotonin) receptor 2A: **HTR2A, 3356** OR receptor 2B: **HTR2B, 3357** OR receptor 2C: **HTR2C, 3358**				
L-NGC-5HT2	CRL-10287†	mouse	R+ (human)	
5-Hydroxytryptamine (serotonin) receptor 3A: **Htr3a, 15561**				
N1E-115	CRL-2263	mouse	R+	
5-Hydroxytryptamine (serotonin) receptor (16 serotonin receptors: 1A,1B,1D,1E,1F,2A,2B, 2C,3A,3B,4,5A,5B,6,7,8)				
OK	CRL-1840	opossum	R+	
5-Hydroxytryptamine (serotonin) product				
COLO 320DM	CCL-220	human	P+	
COLO 320HSR	CCL-220.1	human	P+	
ICAM1. *See* Intercellular adhesion molecule 1 (ICAM1).				
IgE, low affinity (CD23). *See* Fc fragment of IgE, low affinity II, receptor for (CD23A).				
IL. *See* Interleukin.				
Insulin (many species)				
AE9D6	HB-125	mouse/mouse	MAb	Anti insulin (many species)
BE3F9	HB-133	mouse/mouse	MAb	Anti insulin (many species)
CC9C10	HB-123	mouse/mouse	MAb	Anti insulin (many species)
CE9H9	HB-127	mouse/mouse	MAb	Anti insulin (many species)
CG7C7	HB-126	mouse/mouse	MAb	Anti insulin (many species)
DB9G8	HB-124	mouse/mouse	MAb	Anti insulin (many species)
Insulin II: **Ins2, 16334**				
αTC1 Clone 9	CRL-2350	mouse	P–	
cβ-TC-6	CRL-11506†	mouse	P+	
CW13.20-3B3	CRL-1669	mouse	P+	
TGP55	CRL-2150	mouse	P+	
NIT-1	CRL-2055	mouse	P+	
NIT-2	CRL-2364	mouse	P+	
Insulin 2: **Ins2, 24506**				
AtT-20ins	CRL-11285†	mouse	P+ (rat)	
AR42J	CRL-1492	rat	P+	
ARIP	CRL-1674	rat	P+	
RIN-14B	CRL-2059	rat	P–	
RIN-5F	CRL-2058	rat	P+	
RIN-m	CRL-2057	rat	P+	
RIN-m5F	CRL-11605†	rat	P+	
Insulin 2 (species not yet curated)				
HIT-T15	CRL-1777	Syrian golden hamster	P+	
Insulin receptor: **INSR, 3643**				
C3A	CRL-10741†	human	R+	
Hep G2	HB-8065†	human	R+	
IM-9	CCL-159	human	R+	
MCF-10-2A	CRL-10781†	human	R+	
MCF 10F	CRL-10318†	human	R+	Responsive
αIR-1	HB-175	mouse/mouse	MAb	Anti human insulin receptor
DII 33.1	CRL-1827	mouse/mouse	MAb	Anti human placental insulin receptor
Insulin receptor: **Insr, 16337**				
3T3-L1	CL-173	mouse	R+	
insulin receptor: **Insr, 24954**				
AR42J	CRL-1492	rat	R+	
NMU	CRL-1743	rat	R+	
RBA	CRL-1747	rat	R+	
Insulin-like growth factor: **Igf1, 24482** OR **Igf2, 24483**				
NRK-49F	CRL-1570	rat	R+	
NRK-52E	CRL-1571	rat	R+	
Insulin-like growth factor binding protein 2 (36kD): **IGFBP2, 3485**				
MCF7	HTB-22	human	P+	
Insulin-like growth factor binding protein 4: **IGFBP4, 3487**				
MCF7	HTB-22	human	P+	

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Insulin-like growth factor binding protein 5: **IGFBP5, 3488**				
MCF7	HTB-22	human	P+	
Insulin-like growth factor 1 receptor: **IGF1R, 3480**				
SK-N-AS	CRL-2137	human	R+	
U-2 OS	HTB-96	human	R+	
H19-7/IGF-IR	CRL-2526	rat	R+ (human)	
Insulin-like growth factor 2 (somatomedin A): **IGF2, 3481**				
SK-N-AS	CRL-2137	human	P+	
Insulin-like growth factor 2 receptor: **IGF2R , 3482**				
C3A	CRL-10741†	human	R+	
Hep G2	HB-8065†	human	R+	
NCI-H146	HTB-173	human	R+	
NCI-H526	CRL-5811	human	R+	
NCI-H69	HTB-119	human	R+	
NCI-H82	HTB-175	human	R+	
U-2 OS	HTB-96	human	R+	Responsive
Integrin-associated protein. *See* CD47.				
Integrin, alpha1: **ITGA1, 3672**				
TS2/7.1.1	HB-245	mouse/mouse	MAb	Anti human VLA-1 alpha, integrin alpha 1; anti CD49a
Integrin, alpha 2b (platelet glycoprotein IIb of IIb/IIIa complex, antigen CD41B): **ITGA2B, 3674**				
MEG-01	CRL-2021	human	A+	
Integrin, alpha 3 (antigen CD49C, alpha3 subunit of VLA-3 receptor): **ITGA3, 3675** AND beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12): **ITGB1, 3688**				
HK-2	CRL-2190	human	P+	
Integrin, alpha 4: **Itga4, 16401**				
R1-2	HB-227	rat/mouse VLA-4	MAb	Anti mouse LPAM-1 (lymphocyte Peyer's patch HEV adhesion molecule),
Integrin, alpha 4 (species not yet curated)				
FW3-218-1	HB-261	mouse/mouse	MAb	Anti sheep alpha 4 integrin (VLA-4, CD49d)
Integrin, alpha 4: **Itga4, 16401** AND beta 7: **Itgb7, 16421**				
TK-1	CRL-2396	mouse	A+	
DATK32	HB-294	rat/mouse	MAb	Anti mouse alpha 4 beta 7 integrin
Integrin, alpha 5 (fibronectin receptor, alpha polypeptide): **ITGA5, 3678**				
ARH-77	CRL-1621	human	A+	
HS-Sultan	CRL-1484	human	A+	
IM-9	CCL-159	human	A+	
RPMI 8226	CCL-155	human	A+	
Integrin, alpha 6: **Itga6, 114517**				
YPEN-1	CRL-2222	rat	A+	
Integrin, alpha D: **ITGAD, 3681** (human; rat gene not yet curated)				
226H	HB-12592†	mouse/mouse	MAb	Anti rat alpha D integrin
236L	HB-12593†	mouse/mouse	MAb	Anti rat alpha D integrin
Integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide): **ITGAL, 3683**				
ARH-77	CRL-1621	human	A+	
Farage	CRL-2630	human	A+	
HS-Sultan	CRL-1484	human	A+	
IM-9	CCL-159	human	A+	
MC/CAR	CRL-8083†	human	A+	
NK-92	CRL-2407	human	A+	
NK-92CI	CRL-2409	human	A+	
NK-92MI	CRL-2408	human	A+	
TS1/22.1.1.13	HB-202	mouse/mouse	MAb	Anti human CD11a
TS2/4.1.1	HB-244	mouse/mouse	MAb	Anti human CD11a
Integrin alpha L: **Itgal, 16408**				
FD441.8	TIB-213	rat/mouse	MAb	Anti mouse CD11a
M17/4.4.11.9	TIB-217	rat/mouse	MAb	Anti mouse CD11a
M17/5.2	TIB-237	rat/mouse	MAb	Anti mouse CD11a

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Integrin, alpha M (complement component receptor 3, alpha; also known as CD11b (p170), macrophage antigen alpha polypeptide): **ITGAM, 3684**				
DMS 114	CRL-2066	human	A+	
DMS 153	CRL-2064	human	A+	
17aba	HB-248	mouse/mouse	MAb	Anti human CD11b
44aacb	HB-249	mouse/mouse	MAb	Anti human CD11b
LM2/1.6.11	HB-204	mouse/mouse	MAb	Anti human CD11b, anti human Mac-1 antigen, alpha chain
MY904	HB-9510†	mouse/mouse	MAb	Anti human CD11b
OKM 1	CRL-8026†	mouse/mouse	MAb	Anti human CD11b
Integrin alpha M: **Itgam, 16409**				
AMJ2-C11	CRL-2456	mouse	A+	
AMJ2-C8	CRL-2455	mouse	A+	
MH-S	CRL-2019	mouse	A+	
NFS-70 C-10	CRL-1694	mouse	A+	
PMJ2-PC	CRL-2457	mouse	A+	
WEHI-274.1	CRL-1679	mouse	A+	
PMJ2-R	CRL-2458	mouse	A+	
5C6 Clone 1	CRL-1969	rat/mouse	MAb	Anti mouse CD11b
M1/70.15.11.5.HL	TIB-128	rat/mouse	MAb	Anti mouse Mac-1, alpha chain
Integrin alpha M: **Itgam, 16409** AND beta 2: **Itgb2, 16414**				
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
I-11.15	CRL-2470	mouse	A+	
I-13.35	CRL-2471	mouse	A+	
Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51): **ITGAV, 3685** AND beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12): **ITGB1, 3688**				
293	CRL-1573	human	R+	
Integrin alpha X: **Itgax, 16411**				
N418	HB-224	Armenian hamster/ mouse	MAb	Anti mouse CD11
Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12): **ITGB1, 3688**				
Farage	CRL-2630	human	A+	
TS2/16.2.1	HB-243	mouse/mouse anti CD29	MAb	Anti human VLA-1 beta, integrin beta 1;
Integrin beta 1 (fibronectin receptor beta): **Itgb1, 16412**				
F9	CRL-1720	mouse		Three copies of the beta 1 integrin gene
KMI6	CRL-2179	rat/mouse	MAb	Anti mouse integrin beta 1 subunit (CD29)
Integrin beta 1 (fibronectin receptor beta) (species not yet curated)				
FW4-101-1-1	HB-289	mouse/mouse	MAb	Anti sheep beta 1 integrin (CD29)
Integrin, beta 2 (antigen CD18 (p95), lymphocyte function-associated antigen 1; macrophage antigen 1 (mac-1) beta subunit): **ITGB2, 3689**				
IB4	HB-10164†	mouse/mouse	MAb	Anti human CD18
TS1/18.1.2.11	HB-203	mouse/mouse	MAb	Anti human CD18
Integrin beta 2: **Itgb2, 16414**				
2E6	HB-226	Armenian hamster/ mouse	MAb	Anti mouse CD18
M18/2.a.12.7	TIB-218	rat/mouse	MAb	Anti mouse CD18
Integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61): **ITGB3, 3690**				
MEG-01	CRL-2021	human	A+	
AP-3	HB-242	mouse/mouse	MAb	Anti human integrin, beta 3
LK-4	CRL-2345	mouse/mouse	MAb	Anti human platelet glycoprotein GPIIIa
Integrin beta 3 (Cd61): **Itgb3, 29302**				
YPEN-1	CRL-2222	rat	A+	
Integrin beta 7: **Itgb7, 16421**				
FIB504.64	HB-293	rat/mouse	MAb	Anti mouse beta 7 integrin
FIB21	HB-295	rat/mouse	MAb	Anti mouse beta 7 integrin

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Integrin, leukocyte. *See* Integrin alpha X.				
Intercellular adhesion molecule 1 (CD54), human rhinovirus receptor: **ICAM1, 3383**				
BC-3	CRL-2277	human	A+	
Farage	CRL-2630	human	A+	
LS1034	CRL-2158	human	A+	
LS411N	CRL-2159	human	A+	
LS513	CRL-2134	human	A+	
NK-92	CRL-2407	human	A+	
NK-92CI	CRL-2409	human	A+	
NK-92MI	CRL-2408	human	A+	
R6.5.D6.E9.B2	HB-9580†	mouse/mouse	MAb	Anti human ICAM-1
Intercellular adhesion molecule: **Icam1, 15894**				
bEnd.3	CRL-2299	mouse	A+	
BE29G1	HB-233	rat/mouse	MAb	Anti mouse ICAM-1
YN1/1.7.4	CRL-1878	rat/rat	MAb	Anti mouse ICAM-1
Interferon				
HT-1376	CRL-1472	human	P+	
MG-63	CRL-1427	human	P+	
Mo	CRL-8066†	human	P+	
Interferon, alpha (over 20 loci)				
KG-1	CRL-8031†	human	P+	
Interferon (alpha, beta, and omega) receptor 2: **IFNAR2, 3455**				
Hs 294T	HTB-140	human	R+	Responsive
Interferon, gamma: **IFNG, 3458**				
Jurkat, Clone E6-1	TIB-152	human	P+	
TALL-104	CRL-11386†	human	P+	
IFGCP-F1BA10	HB-8291†	mouse/mouse	MAb	Anti human gamma interferon
gamma3-11.1	HB-8700†	mouse/mouse	MAb	Anti human gamma interferon
Interferon, gamma: **Ifng, 15978**				
R4-6A2	HB-170	rat/mouse	MAb	Anti mouse gamma interferon
Interferon, gamma, receptor: **Ifngr, 15979**				
GR-20	CRL-2024	rat/mouse	MAb	Anti mouse receptor for gamma interferon
GR-96	CRL-2013	rat/mouse	MAb	Anti mouse receptor for gamma interferon
Interleukin 1 alpha: **Il1a, 16175** OR 1 beta: **Il1b, 16176**				
J774A.1	TIB-67	mouse	P+	
MH-S	CRL-2019	mouse	P+	
NCTC 3749	CCL-46.1	mouse	P+	
P388D1 (IL-1)	TIB-63	mouse	P+	
Interleukin 1 alpha: **Il1a, 24493** OR 1 beta: **Il1b, 24494**				
NR8383	CRL-2192	rat	P+	
Interleukin 1, alpha: **IL1A, 3552**				
HS-5	CRL-11882†	human	P+	
Interleukin 1, beta: **IL1B, 3553**				
HS-5	CRL-11882†	human	P+	
ILB1-H21	HB-10220†	mouse/mouse	MAb	Anti human IL-1 beta
ILB1-H34	HB-10221†	mouse/mouse	MAb	Anti human IL-1 beta
ILB1-H6	HB-10219†	mouse/mouse	MAb	Anti human IL-1 beta
ILB1-H67	HB-10222†	mouse/mouse	MAb	Anti human IL-1 beta
Interleukin 1, beta: **IL1B, 281251**				
SA22	CRL-2052	mouse/mouse	MAb	Anti bovine IL-1 beta (rboIL-1 beta)
Interleukin 1 receptor, type I: **Il1r1, 16177** OR type II: **Il1r2, 16178**				
D10.G4.1	TIB-224	mouse	R+	Responsive
LBRM-33-1A5	CRL-8079†	mouse	R+	Responsive
LBRM TG6	CRL-1778	mouse	R+	Responsive

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Interleukin 2: **IL2, 3558**				
H9	HTB-176	human	P+	
HuT 78	TIB-161	human	P+	
J45.01	CRL-1990	human	P+	
Jurkat, Clone E6-1	TIB-152	human	P+	
NK-92	CRL-2407	human	P–	
NK-92MI	CRL-2408	human	P+	
Interleukin 2: **Il2, 16183**				
EL4.IL-2	TIB-181	mouse	P+	
LBRM-33-1A5	CRL-8079†	mouse	P+	
LBRM-33 clone 4A2	TIB-155	mouse	P+	
LBRM TG6	CRL-1778	mouse	P+	
4B6-1	HB-10968†	rat/mouse	MAb	Anti mouse IL-2
Interleukin 2 receptor, alpha: **IL2RA, 3599** AND beta: **IL2RB, 3560** AND gamma (severe combined immunodeficiency): **IL2RG, 3561**: multicomponent receptor				
H9	HTB-176	human	R+	
HuT 102	TIB-162	human	R+	Responsive
HuT 78	TIB-161	human	R+	Responsive
MJ	CRL-8294†	human	R+	
TALL-104	CRL-11386†	human	R+	Responsive (cells dependent for optimal growth)
2A3A1H	HB-8555†	mouse/mouse	MAb	Anti human IL-2 receptor
7G7B6	HB-8784†	mouse/mouse	MAb	Anti human IL-2 receptor
Interleukin 2 receptor, alpha chain: **Il2ra, 16184** AND beta chain: **Il2rb, 16185** AND gamma chain: **Il2rg, 16186**				
CTLL-2	TIB-214	mouse	R+	
HT-2 clone A5E	CRL-1841	mouse	R+	Responsive (cells dependent for growth)
7D4	CRL-1698	rat/mouse	MAb	Anti mouse IL-2 receptor
PC 61 5.3	TIB-222	rat/mouse	MAb	Anti mouse IL-2 receptor
Interleukin 2 receptor (species not yet curated)				
MYA-1	CRL-2417	cat	R+	Responsive (cells dependent for growth)
Interleukin 2 receptor, alpha: **IL2RA; 3559**				
29SR	CRL-2262	human	A+	
DB	CRL-2289	human	A–	
HH	CRL-2105	human	A–	
HT	CRL-2260	human	A–	
RL	CRL-2261	human	A–	
SUP-T1 [VB]	CRL-1942	human	A–	
7G7B6	HB-8784†	mouse/mouse	MAb	Anti human CD25
Interleukin 2 receptor, alpha chain: **Il2ra, 16184**				
7D4	CRL-1698	rat/mouse	MAb	Anti mouse CD25
PC 61 5.3	TIB-222	rat/mouse	MAb	Anti mouse CD25
Interleukin 2 receptor, beta: **IL2RB, 3560**				
HH	CRL-2105	human	R+	Functional p70 beta chain (IL-2R beta)
Interleukin 3 (colony-stimulating factor, multiple): **IL3, 3562**				
Hs-5	CRL-11882†	human	P+	
Interleukin 3: **Il3, 16187**				
Cl. Ly1^{+}2^{-}/9	CRL-8179†	mouse	P+	
WEHI-3	TIB-68	mouse	P+	
Interleukin 3 receptor, alpha chain: **Il3ra, 16188**				
32D Clone 3	CRL-11346†	mouse	R+	Responsive (cells dependent for growth)
Interleukin 4: **Il4, 16189**				
Cl. Ly1^{+}2^{-}/9	CRL-8179†	mouse	P+	
D10.G4.1	TIB-224	mouse	P+	
11B11	HB-188	rat/mouse	MAb	Anti mouse IL-4

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Interleukin 4 receptor: **IL4R, 3566** AND 2 receptor, gamma (severe combined immunodeficiency): **IL2RG, 3561** Multicomponent receptor				
Ramos (RA 1)	CRL-1596	human	R+	Sensitive
Ramos.2G6.4C10	CRL-1923	human	R+	Sensitive (greater sensitivity than CRL-1596)
interleukin 5: **Il5, 16191**				
D10.G4.1	TIB-224	mouse	P+	
Interleukin 5 receptor, alpha: **IL5RA, 3568**				
Clone 15 HL-60	CRL-1964	human	R+	
Interleukin 6 (interferon, beta 2): **IL6, 3569**				
HS-5	CRL-11882†	human	P+	
LS 180	CL-187	human	P+	
LS 174T	CL-188	human	P+	
U266B1	TIB-196	human	P+	
Interleukin 6: **Il6, 16193**				
AMJ2-C11	CRL-2456	mouse	P+	
EOMA	CRL-2586	mouse	P+	
MPC-11	CCL-167	mouse	P+	
Sp2/mIL-6	CRL-2016	mouse/mouse	P+	
Interleukin 6 (interferon, beta 2): **Il6, 24498**				
NR8383	CRL-2192	rat	P+	
Interleukin 6 receptor: **IL6R, 3570** AND 6 signal transducer (gp130, oncostatin M receptor): **IL6ST, 3572:** multicomponent receptor				
DS-1	CRL-11102†	human	R+	
Interleukin 7 receptor: **Il7r, 16197** AND 2 receptor, gamma chain: **Il2rg, 16186** Multicomponent receptor				
2E8	TIB-239	mouse	R+	Responsive (cells dependent for growth)
Interleukin 8: **IL8, 3576**				
HS-5	CRL-11882†	human	P	
EL-NC-1S	HB-9647†	mouse/mouse	MAb	Anti IL-8 (species unknown)
Interleukin 8 receptor, beta: **IL8RB, 3579**				
10H2.12.1	HB-11494†	mouse/mouse	MAb	Anti human IL-8 receptor, type B
4D1.5.7	HB-11495†	mouse/mouse	MAb	Anti human IL-8 receptor, type B
Interleukin 10: **IL10, 3586**				
COLO 205	CCL-222	human	P+	
LS 174T	CL-188	human	P+	
LS 180	CL-187	human	P+	
JES3-19F1.1.1	HB-10487†	rat/mouse	MAb	Anti human IL-10
Interleukin 10: **Il10, 16153**				
H36.12j	CRL-2449	mouse	P+	
Interleukin 11: **IL11, 3589**				
HS-5	CRL-11882†	human	P+	
Interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35): **IL12A, 3592** AND 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40): **IL12B, 3593**				
20C2	CRL-2382	rat/mouse	MAb	Anti human IL-12 p75
Interleukin 12a: **Il12a, 16159** AND 12b: **Il12b, 16160**				
R2-9A5	CRL-2357	rat/mouse	MAb	Anti mouse IL-12 p75
Interleukin 12b: **Il12b , 16160**				
R2-10F6	CRL-2358	rat/mouse	MAb	Anti mouse IL-12 p40
R1-5D9	CRL-2360	rat/mouse	MAb	Anti mouse IL-12 p40
Interleukin 12 receptor, beta 1: **IL12RB1, 3594**				
HIL12R1.2B10	CRL-2359	rat/mouse	MAb	Anti human IL-12 receptor beta 1 (huIL-12Rbeta1) subunit
Interleukin 15: **IL15, 3600**				
hIL-15-M110	HB-12061†	mouse/mouse	MAb	Anti human IL-15
hIL-15-M111	HB-12062†	mouse/mouse	MAb	Anti human IL-15
Involucrin: **IVL, 3713**				
NCI-H596	HTB-178	human	P+	
SCC-15	CRL-1623	human	P+	
SCC-25	CRL-1628	human	P+	
SCC-9	CRL-1629	human	P+	

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Keratin 4: **KRT4, 3851**				
NCI-H128	HTB-120	human	P–	
NCI-H23	CRL-5800	human	P–	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P–	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
Keratin 5 (epidermolysis bullosa simplex, Dowling-Meara/Kobner/Weber-Cockayne types): **KRT5, 3852**				
CA-HPV-10	CRL-2220	human	P+	
PZ-HPV-7	CRL-2221	human	P+	
Keratin 5 (epidermolysis bullosa simplex, Dowling-Meara/Kobner/Weber-Cockayne types): **KRT5, 3852** AND/OR 8: **KRT8, 3856**				
NCI-H128	HTB-120	human	P+	
NCI-H23	CRL-5800	human	P+	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P+	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
Keratin 7: **KRT7, 3855**				
NCI-H128	HTB-120	human	P–	
NCI-H23	CRL-5800	human	P+	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P–	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
Panc 02.03	CRL-2553	human	P+	
Panc 02.13	CRL-2554	human	P+	
Panc 03.27	CRL-2549	human	P+	
Panc 08.13	CRL-2551	human	P+	
Panc 10.05	CRL-2547	human	P+	
Keratin 8: **KRT8, 3856**				
CA-HPV-10	CRL-2220	human	P+	
MCF-12A	CRL-10782†	human	P+	
MCF-12F	CRL-10783†	human	P+	
PWR-1E	CRL-11611†	human	P+	
PZ-HPV-7	CRL-2221	human	P+	
RWPE-1	CRL-11609†	human	P+	
RWPE-2	CRL-11610†	human	P+	
UCD/AB 6.01	HB-8693†	mouse/mouse	MAb	Anti human CK8
Keratin 8: **Krt8, 25626**				
RLE-6TN	CRL-2300	rat	P+	
RMC	CRL-2573	rat	P–	
Keratin 8 (species not yet curated)				
vEPT	CRL-2087	rabbit	P+	
Keratin 8: **KRT8, 3856** AND 18: **KRT18, 3875**				
UCD/PR 10.11	HB-8694†	mouse/mouse	MAb	Anti human CK8 and CK18
Keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris): **KRT10, 3858**				
HEK001	CRL-2404	human	P–	
NCI-H128	HTB-120	human	P–	
NCI-H23	CRL-5800	human	P–	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P–	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
Keratin 10 (species not yet curated)				
vEPT	CRL-2087	rabbit	P–	
Keratin 11: cytokeratin 11 (CK11)				
vEPT	CRL-2087	rabbit	P+	

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Keratin 13: **KRT13, 3860**				
NCI-H128	HTB-120	human	P–	
NCI-H23	CRL-5800	human	P–	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P–	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
Keratin 14 (epidermolysis bullosa simplex, Dowling-Meara, Koebner): **KRT14, 3861**				
HEK001	CRL-2404	human	P+	
MCF-12A	CRL-10782†	human	P+	
MCF-12F	CRL-10783†	human	P+	
Keratin 18: **KRT18, 3875**				
MCF-10-2A	CRL-10781†	human	P+	
MCF-12A	CRL-10782†	human	P+	
MCF-12F	CRL-10783†	human	P+	
NCI-H128	HTB-120	human	P+	
NCI-H23	CRL-5800	human	P+	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P+	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
Panc 02.03	CRL-2553	human	P+	
Panc 02.13	CRL-2554	human	P+	
Panc 03.27	CRL-2549	human	P+	
Panc 08.13	CRL-2551	human	P+	
Panc 10.05	CRL-2547	human	P+	
RWPE-1	CRL-11609†	human	P+	
RWPE-2	CRL-11610†	human	P+	
PWR-1E	CRL-11611†	human	P+	
THLE-3	CRL-11233†	human	P+	
UCD/AB 6.11	HB-8458†	mouse/mouse	MAb	Anti human CK18
Keratin 19: **KRT19, 3880**				
HCC1008	CRL-2320	human	P+	
HCC1143	CRL-2321	human	P+	
HCC1187	CRL-2322	human	P+	
HCC1395	CRL-2324	human	P+	
HCC1419	CRL-2326	human	P+	
HCC1428	CRL-2327	human	P+	
HCC1500	CRL-2329	human	P+	
HCC1569	CRL-2330	human	P+	
HCC1599	CRL-2331	human	P+	
HCC1806	CRL-2335	human	P+	
HCC1937	CRL-2336	human	P+	
HCC1954	CRL-2338	human	P+	
HCC202	CRL-2316	human	P+	
HCC2157	CRL-2340	human	P+	
HCC2218	CRL-2343	human	P+	
HCC38	CRL-2314	human	P+	
HCC70	CRL-2315	human	P+	
MCF-10-2A	CRL-10781†	human	P+	
MCF-12A	CRL-10782†	human	P–	
MCF-12F	CRL-10783†	human	P–	
NCI-H128	HTB-120	human	P+	
NCI-H23	CRL-5800	human	P–	
NCI-H524	CRL-5831	human	P–	
NCI-H69	HTB-119	human	P+	
NCI-H82	HTB-175	human	P–	
NCI-N417	CRL-5809	human	P–	
SCC-15	CRL-1623	human	P+	
SCC-4	CRL-1624	human	P+	

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Name: Symbol, GeneID				
THLE-3	CRL-11233†	human	P+	
Keratin 19 (species not yet curated)				
vEPT	CRL-2087	rabbit	P+	
Keratin complex 1, acidic, gene 19: **Krt1-19, 117046**				
RLE-6TN	CRL-2300	rat	P+	
Kidney-specific esterase-2 (ES-2)				
RAG	CCL-142	mouse	P+	
Killer cell lectin-like receptor, subfamily A, member 7: **Klra7, 16638**				
4D11	HB-240	rat/mouse	MAb	Anti mouse LGL-1
Kinase insert domain protein receptor: **Kdr, 16542**				
MS1 (MILE SVEN 1)	CRL-2279	mouse	R+	
SVR (SVEN 1 ras)	CRL-2280	mouse	R+	
DC101	HB-11534†	rat/mouse	MAb	Anti mouse VEGF receptor-2 (Flk-1/KDR)
Kininogen: **KNG, 3827**				
2B5	HB-8963†	mouse/mouse	MAb	Anti human kininogen heavy chain
C11C1	HB-8964†	mouse/mouse	MAb	Anti human kininogen light chain
v-*kit* Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog: **KIT, 3815**				
NCI-H187	CRL-5804	human	O+	c-*kit*
NCI-H378	CRL-5808	human	O+	c-*kit*
NCI-H526	CRL-5811	human	O+	c-*kit*
NCI-N417	CRL-5809	human	O–	c-*kit*
BA7.3C.9	HB-10716†	mouse/mouse	MAb	Anti human stem cell factor (hSCF) receptor (CD117)
Kit ligand: **KITLG, 4254**				
HS-5	CRL-11882†	human	P+	
SI/SI4 hSCF220	CRL-2453	mouse	P+ (human)	Membrane-bound protein
SI/SI4 hSCF248	CRL-2454	mouse	P+ (human)	Secreted
Kit ligand: **Kitl, 17311**				
15P-1	CRL-2618	mouse	P+	
L3T4. *See* CD4.				
LAM-1. *See* Selectin L.				
Laminin (about 60 forms of laminin)				
A2058	CRL-11147†	human	R+	Responsive
EHS	CRL-2108	mouse	P+	
M2-10B4	CRL-1972	mouse	P+	
NE	CRL-2070	mouse	P+	
L2-RYC	CRL-2180	rat	P+	
RL-65	CRL-10354†	rat	P+	
2AB1-IA10	HB-8210†	rat/mouse	MAb	
Laminin-1				
PFHR 9	CRL-2423	mouse	P+	
Latent transforming growth factor beta binding protein 1: **LTBP1, 4052** OR protein 2: **LTBP2, 4053**				
HT-29	HTB-38	human	P+	
L-dopa-decarboxylase. *See* Dopa decarboxylase.				
Le3				
SW756	CRL-10302†	human	A+	
Le4				
SW756	CRL-10302†	human	A+	
Le5				
SW756	CRL-10302†	human	A+	
LECAM. *See* Selectin L.				
Lectin, galactose binding, soluble 3: **Lgals3, 16854**				
AMJ2-C8	CRL-2455	mouse	A+	
AMJ2-C11	CRL-2456	mouse	A+	
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
PMJ2-PC	CRL-2457	mouse	A+	
PMJ2-R	CRL-2458	mouse	A+	
M3/38.1.2.8 HL.2	TIB-166	rat/mouse	MAb	Anti mouse Mac-2

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Genes and Bioactive Compounds

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Name: Symbol, GeneID				
Leptin receptor: **LEPR, 3953**				
HP75	CRL-2506	human	R+	Leptin receptor protein and mRNA
Leu-1. *See* CD5.				
Leu-2a. *See* CD8.				
Leu-3. *See* CD4.				
Leu-4. *See* CD3.				
Leu-5. *See* CD2.				
Leu-6. *See* CD1a.				
Leu-7. *See* CD57.				
Leu-8. *See* Selectin L.				
Leu-9. *See* CD7.				
Leucyl/cystinyl aminopeptidase: **LNPEP , 4012**				
HK-2	CRL-2190	human	P+	
Leukemia inhibitory factor (cholinergic differentiation factor): **LIF, 3976**				
HS-5	CRL-11882†	human	P+	
Leukocyte function antigen 1. *See* Integrin, alpha L.				
Leukotrienes				
MC/9	CRL-8306†	mouse	P+	
LGL-1. *See* Killer cell lectin-like receptor, subfamily A, member 7.				
Lipopolysaccharide binding protein: **LBP, 3929**				
Mab 1E8	HB-11490†	mouse/mouse	MAb	Anti human LPS binding protein (LBP)
Mab 2B5	HB-11491†	mouse/mouse	MAb	Anti human LPS binding protein (LBP)
Lipoprotein, beta				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Lipotropin. *See* Proopiomelanocortin.				
Low affinity IgE (CD23). *See* Fc fragment of IgE, low affinity II, receptor for (CD23A).				
Low density lipoprotein receptor (familial hypercholesterolemia): **LDLR, 3949**				
B1B3	CRL-2249	mouse/mouse	MAb	Anti human LDL receptor
B1B6	CRL-2248	mouse/mouse	MAb	Anti human LDL receptor
IgG-4A4	CRL-1898	mouse/mouse	MAb	Anti human LDL receptor
Low density lipoprotein receptor: **Ldlr, 16835**				
SVEC4-10	CRL-2181	mouse	R+	High affinity
SVEC4-10EE2	CRL-2167	mouse	R+	High affinity
Low density lipoprotein receptor: **LDLR, 281276**				
C7	CRL-1691	mouse/mouse	MAb	Anti bovine LDL receptor
9D9	CRL-1703	mouse/mouse	MAb	Anti bovine LDL receptor
Low density lipoprotein receptor-related protein 1: **Lrp1, 16971**				
MEF-1	CRL-2214	mouse	P+	Wild type
PEA 10	CRL-2215	mouse	P–	Heterozygous deletion
PEA 13	CRL-2216	mouse	P–	Homozygous deletion
Low density lipoprotein receptor-related protein 1 (species not yet curated)				
IgG-11H4	CRL-1936	mouse/mouse	MAb	Anti LRP, carboxy terminal (various species)
IgG-1B3	CRL-1937	mouse/mouse	MAb	Anti rabbit LRP, 85 kDa subunit
IgG-5D7	CRL-1938	mouse/mouse	MAb	Anti rabbit LRP, 515 kDa subunit
L-*myc*. *See myc.*				
L-selectin. *See* Selectin L.				
Luteinizing hormone/choriogonadotropin receptor: **LHCGR, 3973**				
LHR-1055	CRL-2687	mouse/mouse	MAb	Anti human LH/hCG receptor
LHR-29	CRL-2685	mouse/mouse	MAb	Anti human LH/hCG receptor
LHR-74	CRL-2686	mouse/mouse	MAb	Anti human LH/hCG receptor
Luteinizing hormone/choriogonadotropin receptor: **Lhcgr, 16867**				
MLTC-1	CRL-2065	mouse	R+	Responsive
TM3	CRL-1714	mouse	R+	Responsive
Luteinizing hormone beta polypeptide: **LHB, 3972**				
HP75	CRL-2506	human	P+	Luteinizing hormone beta (LH)
Luteinizing hormone subunit beta: **Lhb, 25329**				
RC-4B/C	CRL-1903	rat	P+	Luteinizing hormone beta (LH)
Luteinizing hormone releasing hormone (LHRH). *See* Gonadotropin releasing hormone.				
Ly-5. *See* Protein tyrosine phosphatase, receptor type C.				

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Ly-6C; Ly6.2C. *See* Lymphocyte antigen 6 complex, locus C.				
Lyb-2; Lyb-2.1. *See* CD72 antigen.				
Lyb 8.2. *See* CD22 antigen.				
Lymphocyte antigen 6 complex, locus A: **Ly6a, 110454**				
E13 161-7	HB-215	rat/mouse	MAb	Anti mouse Sca-1
Lymphocyte antigen 6 complex, locus C: **Ly6c, 17067**				
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
143-4-2	CRL-1790	mouse/mouse	MAb	Anti mouse Ly 6.2C
Lymphocyte antigen 75: **LY75, 4065**				
MG38	CRL-2640	mouse/mouse	MAb	Anti human DEC-205
Lymphocyte antigen 75: **Ly75, 17076**				
DEC-205	HB-290	rat/mouse	MAb	Anti mouse DEC-205
Lymphocyte function antigen 1 (LFA-1). *See* Integrin, alpha L and/or integrin, beta 2.				
Lymphocyte function antigen 2 (LFA-2). *See* CD2.				
Lymphocyte function antigen 3 (LFA-3). *See* CD58.				
Lymphotoxin alpha (TNF superfamily, member 1): **LTA, 4049**				
RPMI 1788	CCL-156	human	P+	
SK-N-FI	CRL-2142	human	R+	Responsive
Lysozyme				
GDM-1	CRL-2627	human	P+	
THP-1	TIB-202	human	P+	
U-937	CRL-1593.2	human	P+	
I-11.15	CRL-2470	mouse	P+	
I-13.35	CRL-2471	mouse	P+	
IC-21	TIB-186	mouse	P+	
J774A.1	TIB-67	mouse	P+	
LADMAC	CRL-2420	mouse	P+	
P388D1 (IL-1)	TIB-63	mouse	P+	
P815	TIB-64	mouse	P+	
PU5-1.8 (PU5-1R)	TIB-61	mouse	P+	
RAW 264.7	TIB-71	mouse	P+	
RAW 264.7γNO(-)	CRL-2278	mouse	P+	
RAW 309 Cr.1	TIB-69	mouse	P+	
WEHI-3	TIB-68	mouse	P+	
WR19M.1	TIB-70	mouse	P+	
Lyt 1; Lyt 1.1; Lyt 1.2. *See* CD5 antigen (p56-62).				
Lyt 2; Lyt 2.1; Lyt 2.2. *See* CD8.				
MAC-1. *See* Integrin, alphaM and integrin, beta 2.				
MAC-2. *See* Lectin, galactose-binding, soluble, 3.				
MAC-3				
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
M3/84.6.34	TIB-168	rat/mouse	MAb	Anti mouse Mac-3
Macrophage colony stimulating factor (M-CSF.) *See* Colony stimulating factor 1 (macrophage).				
Macrophage-inhibitory protein-1 alpha				
HS-5	CRL-11882†	human	P+	
MAD, mothers against decapentaplegic homolog 4 *(Drosophila)*: **MADH4, 4089**				
PL45	CRL-2558	human	O+	
MADCAM1. *See* Mucosal vascular addressin cell adhesion molecule 1.				
Mammalian splicing factor (SC35). *See* Splicing factor, arginine/serine-rich 2.				
Mast cell growth factor 2 (MCGF2). *See* Growth factor receptor bound protein 2-associated protein 2.				
Matrix metalloproteinase 3 (stromelysin 1, progelatinase): **MMP3, 4314** OR metalloproteinase 10 (stromelysin 2): **MMP10, 4319** OR metalloproteinase 11 (stromelysin 3): **MMP11, 4320** (human; rabbit gene not yet curated)				
HIG-82	CRL-1832	rabbit	P+	
Matrix metalloproteinase 7 (matrilysin, uterine): **MMP7, 4316**				
SW620	CCL-227	human	P+	
SW480 [SW-480]	CCL-228	human	P–	

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Genes and Bioactive Compounds

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M-CSF. *See* Colony stimulating factor 1 (macrophage) (CSF1).				
MDNCF. *See* Interleukin 8 (IL8).				
Melanin				
G-361	CRL-1424	human	P+	
SH-4	CRL-7724	human	P+	
SK-MEL-1	HTB-67	human	P+	
Clone M-3	CCL-53.1	mouse	P+	
RPMI 1846	CCL-49	Syrian golden hamster	P+	
Melanoma, proteoglycan antigen				
WM-115	CRL-1675	human	P+	
WM-266-4	CRL-1676	human	P+	
Membrane metallo-endopeptidase (neutral endopeptidase, enkephalinase, CALLA, CD10): **MME, 4311**				
Farage	CRL-2630	human	A+/–	
GA-10	CRL-2392	human	A+	
JM1	CRL-10423†	human	A+	
MV-4-11	CRL-9591†	human	A+/–	
NCI-H929	CRL-9068†	human	A–	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
Pfeiffer	CRL-2632	human	A+	
Reh	CRL-8286†	human	A+	
RS4;11	CRL-1873	human	A–	
SUP-B15	CRL-1929	human	A+	
SUP-T1 [VB]	CRL-1942	human	A–	
Toledo	CRL-2631	human	A+	
Membrane-spanning 4-domains, subfamily A, member 1: **MS4A1, 931**				
29SR	CRL-2262	human	A–	
ARH-77	CRL-1621	human	A+	
BC-3	CRL-2277	human	A–	
DB	CRL-2289	human	A+	
DS-1	CRL-11102†	human	A–	
Farage	CRL-2630	human	A+	
GA-10	CRL-2392	human	A+	
HS-Sultan	CRL-1484	human	A–	
HT	CRL-2260	human	A+	
IM-9	CCL-159	human	A+	
MC/CAR	CRL-8083†	human	A+	
NK-92	CRL-2407	human	A–	
NK-92CI	CRL-2409	human	A–	
NK-92MI	CRL-2408	human	A–	
OML, clone 13C	CRL-2312	human	A+	
Pfeiffer	CRL-2632	human	A+	
RL	CRL-2261	human	A+	
RPMI 8226	CCL-155	human	A–	
SML, clone 4D8	CRL-2311	human	A+	
Toledo	CRL-2631	human	A+	
1F5	HB-9645†	mouse/mouse	MAb	Anti human CD20 B cell antigen (Bp35)
C273	HB-9303†	mouse/mouse	MAb	Anti human CD20
Milk fat globule membrane antigen				
MCF-12A	CRL-10782†	human	P+	
MCF-12F	CRL-10783†	human	P+	
Mink cell focus-forming retrovirus				
NFS-5 C-1	CRL-1693	mouse	P+	
Moloney murine leukemia virus				
WR19L	TIB-52	mouse	P+	
Monocyte Fc receptor (high affinity, FcRI). *See* Fc fragment of IgG, high affinity Ia, receptor for (CD64).				
Mucin				
AsPC-1	CRL-1682	human	P+	
BxPC-3	CRL-1687	human	P+	

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Capan-1	HTB-79	human	P+	
HT-29	HTB-38	human	P+	
LS123	CCL-255	human	P+	
LS 174T	CL-188	human	P+	
LS 180	CL-187	human	P+	
MES-SA	CRL-1976	human	P–	
NCI-H498	CCL-254	human	P+	
NCI-H661	HTB-183	human	P–	
NCI-H676B	HTB-179	human	P+	
RF-1	CRL-1864	human	P+	
RF-48	CRL-1863	human	P–	
DSL-6B/C2	CRL-2133	rat	P+	
Mucin 1, transmembrane: **MUC1, 4582**				
BC-1	CRL-2230	human	A+	
BC-2	CRL-2231	human	A+	
BC-3	CRL-2277	human	A+	
Capan-2	HTB-80	human	P+	
ChaGo-K-1	HTB-168	human	P+	
HCC2218	CRL-2343	human	A+	
HPAF-II	CRL-1997	human	P+	
VA-ES-BJ	CRL-2138	human	A+	
ZR-75-1	CRL-1500	human	P+	
UC7	HB-9753†	mouse/mouse	MAb	Anti human colonic mucin glycoprotein
Mucin 2, intestinal/tracheal: **MUC2, 4583**				
Capan-2	HTB-80	human	P+	
ChaGo-K-1	HTB-168	human	P+	
ZR-75-1	CRL-1500	human	P+	
Mucin 3A, intestinal: **MUC3A , 4584**				
ChaGo-K-1	HTB-168	human	P–	
ZR-75-1	CRL-1500	human	P–	
Mucin 4, tracheobronchial: **MUC4, 4585**				
HPAF-II	CRL-1997	human	P+	
Mucin 5, subtypes A and C, tracheobronchial/gastric: **MUC5AC, 4586**				
Capan-2	HTB-80	human	P+	
ChaGo-K-1	HTB-168	human	P+	
ZR-75-1	CRL-1500	human	P+	
Mucin 13, epithelial transmembrane: **MUC13, 56667**				
MCF-12A	CRL-10782†	human	P+	
MCF-12F	CRL-10783†	human	P+	
Mucoid				
RPMI 2650	CCL-30	human	P+	
Mucosal vascular addressin cell adhesion molecule 1: **Madcam1, 17123**				
bEnd.3	CRL-2299	mouse	A+	
C166	CRL-2581	mouse	A+	
EOMA	CRL-2586	mouse	A+	
MECA-367	HB-9478†	rat/mouse	MAb	Anti mouse MAdCAM-1
MECA-89	HB-292	rat/mouse	MAb	Anti mouse MAdCAM-1
Multiplication stimulating activity (MSA). *See* Insulin-like growth factor.				
My23				
DMS 114	CRL-2066	human	A+	
DMS 153	CRL-2064	human	A+	
DMS 53	CRL-2062	human	A+	
DMS 79	CRL-2049	human	A+	
v-*myb* myeloblastosis viral oncogene homolog (avian): **MYB, 4602**				
COLO 201	CCL-224	human	O+	
DLD-1	CCL-221	human	O+	
HT-29	HTB-38	human	O+	
LoVo	CCL-229	human	O+	
LS 174T	CL-188	human	O+	
MSTO-211H	CRL-2081	human	O+	c-*myb*
NCI-H146	HTB-173	human	O+	c-*myb*

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v-*myb* myeloblastosis viral oncogene homolog (avian) continued				
NCI-H526	CRL-5811	human	O+	c-*myb*
NCI-H69	HTB-119	human	O+	c-*myb*
NCI-H82	HTB-175	human	O–	
NCI-N417	CRL-5809	human	O–	c-*myb*
SK-CO-1	HTB-39	human	O+	
SW1116	CCL-233	human	O+	
SW1417	CCL-238	human	O–	
SW480	CCL-228	human	O+	
SW620	CCL-227	human	O+	
SW948	CCL-237	human	O+	
Myeloblastosis oncogene: **Myb, 17863**				
M-NFS-60	CRL-1838	mouse	O+	Truncated c-*myb*
MYB (species not yet curated)				
MYB 2-3.76	CRL-1728	mouse/mouse	MAb	Anti chicken MYB (V-MYB)
MYB 2-37.63	CRL-1726	mouse/mouse	MAb	Anti chicken MYB (V-MYB)
MYB 2-7.77	CRL-1724	mouse/mouse	MAb	Anti chicken MYB (V-MYB)
v-*myc* myelocytomatosis viral oncogene homolog (avian): **MYC, 4609**				
DT40	CRL-2111	chicken	O+	c-*myc*
DT95	CRL-2112	chicken	O+	c-*myc*
COLO 201	CCL-224	human	O+	
D341 Med	HTB-187	human	O+	c-*myc* (amplified)
DLD-1	CCL-221	human	O+	c-*myc*+; N–*myc*-
DMS 79	CRL-2049	human	O+	c-*myc*+; N–*myc*+
HL-60	CCL-240	human	O+	
HT-29	HTB-38	human	O+	c-*myc*+; N–*myc*–
LoVo	CCL-229	human	O+	c-*myc*+; N–*myc*–
LS 174T	CL-188	human	O+	c-*myc*+; N–*myc*+
MSTO-211H	CRL-2081	human	O+	c-*myc*+; L–*myc*–; N-*myc*–
NCI-H146	HTB-173	human	O+	c-*myc*
NCI-H187	CRL-5804	human	O+	N-*myc* (not amplified)
NCI-H23	CRL-5800	human	O+	c-*myc*+ (amplified); L-*myc*+
NCI-H378	CRL-5808	human	O+	L-*myc* (not amplified)
NCI-H446	HTB-171	human	O+	c-*myc* (amplified)
NCI-H526	CRL-5811	human	O+	N-*myc*+ (amplified); c-*myc*–; L-*myc*–
NCI-H69	HTB-119	human	O+	N-*myc*+ (amplified); c-*myc*+
NCI-H82	HTB-175	human	O+	c-*myc* (amplified)
NCI-H929	CRL-9068†	human	O+	c-*myc*
NCI-N417	CRL-5809	human	O+	c-*myc*+ (amplified); N-*myc*+
NCI-N87	CRL-5822	human	O+	c-*myc*+; L-*myc*–; N-*myc*–
SNU-1	CRL-5971	human	O+	c-*myc*+; L-*myc*-; N-*myc*–
SNU-16	CRL-5974	human	O+	c-*myc*+; L-*myc*–; N-*myc*–
SNU-5	CRL-5973	human	O+	c-*myc*+; L-*myc*–; N-*myc*–
NTERA-2 cl.D1	CRL-1973	human	O+	N-*myc*
SJRH30 [RMS 13]	CRL-2061	human	O+	N-*myc* (not amplified)
SK-CO-1	HTB-39	human	O+	c-*myc*+; N-*myc*+
SW1116	CCL-233	human	O+	c-*myc*+; N-*myc*–
SW1417	CCL-238	human	O+	c-*myc*+; N-*myc*–
SW480	CCL-228	human	O+	c-*myc*+; N-*myc*–
SW620	CCL-227	human	O+	c-*myc*+; N-*myc*–
SW948	CCL-237	human	O+	c-*myc*+; N-*myc*-
MYC CT 9-B7.3	CRL-1725	mouse /mouse	MAb	Anti human *myc* (c-*myc*) protein
MYC CT 14-G4.3	CRL-1727	mouse /mouse	MAb	Anti human *myc* (c-*myc*) protein
MYC 1-9E10.2	CRL-1729	mouse /mouse	MAb	Anti human *myc* (c-*myc*) protein
Myelocytomatosis oncogene: **Myc, 17869**				
DUKX B1	CRL-9010†	chicken	P+ (mouse)	Overproduces mouse c-*myc* protein when heated
Myeloid leukemia (CD33). *See* CD33.				
Myeloid leukemia antigen (M-1)				
GDM-1	CRL-2627	human	A+	

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Myeloperoxidase: **MPO, 4353**				
GDM-1	CRL-2627	human	P+	
MEG-01	CRL-2021	human	P–	
RS4;11	CRL-1873	human	P–	
Myoglobin: **MB, 4151**				
RD	CCL-136	human	P+	
Myokinase				
A-10	CRL-1476	rat	P+	
A7r5	CRL-1444	rat	P+	
H9c2(2-1)	CRL-1446	rat	P+	
Myosin				
RD	CCL-136	human	P+	ATPase
G-8	CRL-1456	mouse	P+	
A-10	CRL-1476	rat	P+	
A7r5	CRL-1444	rat	P+	
H9c2(2-1)	CRL-1446	rat	P+	
L6	CRL-1458	rat	P+	
L8	CRL-1769	rat	P+	
QM7	CRL-1962	Japanese quail	P+	Light chain 2; heavy chain
A4.74	CRL-2041	mouse/mouse heavy chain	MAb	Anti human fast and rat fast IIa myosin
A4.840	CRL-2043	mouse/mouse heavy chain (MyHC)	MAb	Anti adult human and rat slow myosin
A4.951	CRL-2046	mouse/mouse	MAb	Anti human and rat slow myosin heavy chain (MyHC)
BA-D5	HB-287	mouse/mouse	MAb	Anti rat type 1 myosin heavy chain
BA-G5	HB-276	mouse/mouse	MAb	Anti rat cardiac alpha myosin heavy chain
BF-45	HB-278	mouse/mouse	MAb	Anti rat embryonic myosin heavy chain
BF-F3	HB-283	mouse/mouse	MAb	Anti rat type 2B myosin heavy chain
F1.652	CRL-2039	mouse/mouse heavy chain (MyHC)	MAb	Anti human and rat embryonic myosin
N1.551	CRL-2040	mouse/mouse	MAb	Anti rat fast IIa myosin heavy chain (MyHC)
N2.261	CRL-2047	mouse/mouse myosin heavy chain (MyHC)	MAb	Anti slow and fast IIa human and rat
N3.36	CRL-2042	mouse/mouse	MAb	Anti neonatal and adult human and rat fast myosin heavy chain (MyHC)
SC-71	HB-277	mouse/mouse	MAb	Anti rat type 2A myosin heavy chain
Natriuretic peptide receptor A/guanylate cyclase A (atrionatriuretic peptide receptor A): **NPR1, 4881** OR receptor B/guanylate cyclase B (atrionatriuretic peptide receptor B): **NPR2, 4882**				
NCI-H660	CRL-5813	human	R+	Functional, but no change in growth pattern.
NCI-H82	HTB-175	human	R+	Functional, but no change in growth pattern.
Natriuretic peptide receptor (species not yet curated)				
OK	CRL-1840	opossum	R+	
Nephroblast growth factor (NB-GF)				
G-401	CRL-1441	human	P+	
Nerve growth factor receptor (TNFR superfamily, member 16): **NGFR, 4804**				
A2058	CRL-11147†	human	R+	
Hs 294T	HTB-140	human	R+	
Nerve growth factor receptor: **Ngfr, 18053**				
SCA-9 clone 15	CRL-1734	mouse	R+	
Nerve growth factor receptor: **Ngfr, 24596**				
PC-12	CRL-1721	rat	R+	Responsive
Nerve growth factor receptor (primates)				
200-3-G6-4 (20.4)	HB-8737†	mouse/mouse	MAb	Anti NGF receptor of primates
Neural cell adhesion molecule 1: **NCAM1, 4684**				
NK-92	CRL-2407	human	A+	
NK-92CI	CRL-2409	human	A+	

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Genes and Bioactive Compounds

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Neural cell adhesion molecule 1 continued				
NK-92MI	CRL-2408	human	A+	
SHP-77	CRL-2195	human	A+	
TALL-104	CRL-11386†	human	A+	
Neural cell adhesion molecule 1: **NCAM, 4684** OR molecule 2: **NCAM2, 4685**				
SHP-77	CRL-2195	human	P+	
Neuroblastoma. *See* ras viral (v-*ras*) oncogene homolog.				
Neurofilament protein				
D283 Med	HTB-185	human	P+	
D341 Med	HTB-187	human	P+	
HCN-1A	CRL-10442†	human	P+	
HCN-2	CRL-10742†	human	P+	
Neuromedin B: **NMB, 4828**				
NCI-H1155	CRL-5818	human	P+	
NCI-H1299	CRL-5803	human	P+	
NCI-H187	CRL-5804	human	P–	
NCI-H522	CRL-5810	human	P–	
NCI-H727	CRL-5815	human	P+	
NCI-H810	CRL-5816	human	P–	
NCI-N417	CRL-5809	human	P+	
UMC-11	CRL-5975	human	P+	
Neuron-specific enolase. *See* Enolase 2 (gamma, neuronal)				
Neurotensin: **NTS, 4922**				
MSTO-211H	CRL-2081	human	P–	
Neurotensin/neuromedin N gene: **Nts, 57303**				
6-23 (Clone 6)	CRL-1607	rat	P+	
Neurotensin receptor: **Ntsr, 18216** OR receptor 2: **Ntsr2, 18217**				
N1E-115	CRL-2263	mouse	R+	
Neurotransmitter				
T84	CCL-248	human	R+	
Neutrophil attractant/activation protein 1. *See* Interleukin 8.				
Neutrophil migration inhibitory factor (NIF-T) *See* Colony stimulating factor 2 (granulocyte-macrophage).				
Nidogen 1: **Nid1, 18073**				
EHS	CRL-2108	mouse	P+	
NE	CRL-2070	mouse	P+	
PFHR 9	CRL-2423	mouse	P+	Entactin-1
Nidogen: **Nid, 25494**				
L2-RYC	CRL-2180	rat	P+	
NK cell antigen (LGL-1). *See* Killer cell lectin-like receptor, subfamily A, member 7.				
N-*myc*. *See myc.*				
Norepinephrine				
COLO 320DM	CCL-220	human	P+	
COLO 320HSR	CCL-220.1	human	P+	
CATH.a	CRL-11179†	mouse	P+	
PC-12	CRL-1721	rat	P+	
Nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor): **NR3C1, 2908**				
HPAC	CRL-2119	human	R+	Sensitive
MCF-10-2A	CRL-10781†	human	R+	
MCF 10F	CRL-10318†	human	R+	Responsive
MDA-kb2	CRL-2713	human	R+	
T-47D	HTB-133	human	R+	
H19-7/IGF-IR	CRL-2526	rat	R+(human)	Insulin-like growth factor (IGF-IR)
Glucocorticoid receptor: **Grl, 24413**				
AR42J	CRL-1492	rat	R+	Responsive
C_6	CCL-107	rat	R+	
McA-RH7777	CRL-1601	rat	R+	Responsive
McA-RH8994	CRL-1602	rat	R+	Sensitive
NMU	CRL-1743	rat	R+	
RBA	CRL-1747	rat	R+	

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Glucocorticoid receptor (species not yet curated)				
DDT$_1$ MF-2	CRL-1701	Syrian golden hamster	R+	Sensitive
HIT-T15	CRL-1777	Syrian golden hamster	R+	Sensitive
Nuclear receptor subfamily 3, group C, member 1: **Nr3c1, 14815** AND glucocorticoid receptor: **Grl, 24413**				
FIGR	CRL-2173	mouse/mouse	MAb	Anti mouse and rat glucocorticoid receptor
Nucleosome assembly protein 1-like 1: **NAP1L1, 4673**				
EL-NC-1S	HB-9647†	mouse/mouse or IL-8	MAb	Anti NAP-1, also known as interleukin 8
N-*ras*. *See ras*.				
OKT10. *See* CD38.				
Osteoblast specific factor 2 (fasciclin I-like): **OSF-2, 10631**				
5H8	CRL-2646	mouse/mouse	MAb	Anti human periostin
Osteoblast specific factor 2 (fasciclin I-like): **Osf2-pending, 50706** AND runt related transcription factor 2: **Runx2, 12393**				
MC3T3-E1 Subclone 14	CRL-2594	mouse	P+	
MC3T3-E1 Subclone 24	CRL-2595	mouse	P+	
MC3T3-E1 Subclone 30	CRL-2596	mouse	P+	
MC3T3-E1 Subclone 4	CRL-2593	mouse	P+	
Osteonectin. *See* Secreted protein, acidic, cysteine-rich (osteonectin).				
Oxysterol binding protein: **OSBP, 5007** (human; species not yet curated)				
IgG-B16	CRL-1899	mouse/mouse	MAb	Anti hamster oxysterol binding protein
IgG-11H9	CRL-2213	mouse/mouse	MAb	Anti rabbit oxysterol binding protein
Osteocalcin (OCN). *See* Bone gamma-carboxyglutamate (gla) protein.				
Osteosacoma derived growth factor (ODGF)				
U-2 OS	HTB-96	mouse	P+	
Ovalbumin, chicken				
E.G7-OVA	CRL-2113	mouse	P+ (chicken)	
Oxytocin, prepro- (neurophysin I): **OXT, 5020**				
DMS 114	CRL-2066	human	P+	
DMS 153	CRL-2064	human	P+	
DMS 53	CRL-2062	human	P+	
DMS 79	CRL-2049	human	P+	
Oxcytocin: **Oxt, 25504**				
PS 38	CRL-1950	mouse/mouse	MAb	Anti rat NP-OT
PS 60	CRL-1800	mouse/mouse	MAb	Anti rat NP-OT
PS 67	CRL-1797	mouse/mouse	MAb	Anti rat NP-OT
P glycoprotein. *See* ATP binding cassette.				
p27 protein				
HP75	CRL-2506	human	P+	
p 53. *See* Tumor protein p53 (Li-Fraumeni syndrome).				
Pancreas-associated antigen				
AsPC-1	CRL-1682	human	P+	
Pancreas cancer-specific antigen				
BxPC-3	CRL-1687	human	P+	
Pancreas-specific antigen				
AsPC-1	CRL-1682	human	P+	
Pancreastatin				
HP75	CRL-2506	human	P+	
Pancreatic oncofetal antigen (POA)				
CFPAC-1	CRL-1918	human	P+	
Parathormone. *See* Parathyroid hormone.				
Parathyroid hormone: **PTH , 5741**				
COLO 320DM	CCL-220	human	P+	
COLO 320HSR	CCL-220.1	human	P+	
DMS 53	CRL-2062	human	P+	
DMS 79	CRL-2049	human	P+	

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Genes and Bioactive Compounds

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Parathyroid hormone/parathyroid hormone-related peptide receptor: **Pthr, 24696** OR hormone receptor 2: **Pthr2, 81753**				
UMR-106	CRL-1661	rat	R+	Responsive
UMR-108	CRL-1663	rat	R+	Responsive
Parathyroid hormone (PTH) receptor: PTHR (opossum gene not yet curated)				
OK	CRL-1840	opossum	R+	
Parathyroid hormone-like hormone: **PTHLH, 5744**				
786-O	CRL-1932	human	P+	
Parathyroid hormone-like peptide: **Pthlh, 19227**				
MC3T3-E1 Subclone 14	CRL-2594	mouse	P+	
MC3T3-E1 Subclone 24	CRL-2595	mouse	P–	
MC3T3-E1 Subclone 30	CRL-2596	mouse	P–	
MC3T3-E1 Subclone 4	CRL-2593	mouse	P+	
PCA-1. *See* Ectonucleotide pyrophosphatase/phosphodiesterase 1.				
Peptide hormone				
T84	CCL-248	human	R+	
Peptide hydrolase				
SCA-9 clone 15	CRL-1734	mouse	P+	
Periostin. *See* Osteoblast specific factor 2 (fasciclin I-like).				
Perlecan. *See* Heparan sulfate proteoglycan 2 (perlecan).				
PETA-3 (CD151). *See* CD151.				
Peyer's patch endothelial cells, human. *See* CD44.				
Peyer's patch endothelial cells, mouse. *See* Mucosal vascular addressin cell adhesion molecule 1				
pgp-1. *See* CD44				
Phosphatase and tensin homolog (mutated in multiple advanced cancers 1): **PTEN, 5728**				
LN-18	CRL-2610	human	O+	Wild type
LN-229	CRL-2611	human	O+	Wild type
Phospholipase C, gamma 1 (formerly subtype 148): **PLCG1, 5335**				
J.γ1	CRL-2678	human	P–	
J.γ1.WT	CRL-2679	human	P+	
Jurkat, Clone E6-1	TIB-152	human	P+	
Phosphoserine aminotransferase: **PSA, 29968**				
22Rv1	CRL-2505	human	A+	
CA-HPV-10	CRL-2220	human	A–	
DU 145	HTB-81	human	A–	
LNCaP clone FGC	CRL-1740	human	A+	
MDA PCa 2b	CRL-2422	human	A+	
PWR-1E	CRL-11611†	human	A+	
PZ-HPV-7	CRL-2221	human	A–	
RWPE-1	CRL-11609†	human	A+	
RWPE-2	CRL-11610†	human	A+	
F5-A-1/22.8.13	HB-8051†	mouse/mouse	MAb	Anti human prostate antigen (PA)
RLSD06	HB-8527†	mouse/mouse	MAb	Anti human prostate antigen (PA)
RLSD09	HB-8525†	mouse/mouse	MAb	Anti human prostate antigen (PA)
Pituitary adenylate cyclase-activating polypeptide receptor 27 (PACAP-27)				
HP75	CRL-2506	human	R+	
Pituitary adenylate cyclase-activating polypeptide receptor 38 (PACAP-38)				
HP75	CRL-2506	human	R+	
Placental lactogen. *See* Chorionic somatomammotropin hormone 1.				
Plasma cell antigen (PCA)				
DS-1	CRL-11102†	human	A+	
Plasminogen: **PLG , 5340**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Plasminogen activator				
HE-LU(Rifkin)	CRL-7717*	human	P+	
HT-29	HTB-38	human	P–	
GCT	TIB-223	human	P+	
MIA PaCa-2	CRL-1420	human	P+	
SK-N-SH	HTB-11	human	P+	

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Name: Symbol, GeneID				
CL-S1	CRL-1615	mouse	P+	
F9	CRL-1720	mouse	P+	
TM4	CRL-1715	mouse	P+	
PK(15)	CCL-33	pig	P+	
LLC-PK1	CL-101	pig	P+	
LLC-PK1A	CL-101.1	pig	P+	
NMU	CRL-1743	rat	P+	
LLC-RK_1	CCL-106	rabbit	P+	
LLC-MK_2	CCL-7	Rhesus monkey	P+	
LLC-MK_2	CCL-7.1	Rhesus monkey	P+	
Plasminogen activator, tissue: **PLAT, 5327**				
CHL-1	CRL-9446†	human	P+	
HMCB	CRL-9607†	human	P+	
CHO 1-15_{500}	CRL-9606†	Chinese hamster	P+ (human)	
Plasminogen activator, urokinase receptor: **PLAUR, 5329**				
HT-29	HTB-38	human	R+	
RKO	CRL-2577	human	R+	
Platelet-activating factor (five variants)				
HEC-1-A	HTB-112	human	P+	
Platelet-activating factor receptor: **PTAFR, 5724**				
HEC-1-A	HTB-112	human	R+	Responsive
Platelet-derived growth factor alpha polypeptide: **PDGFA , 5154**				
NCI-H23	CRL-5800	human	P+	
NCI-H661	HTB-183	human	P+	
NCI-H69	HTB-119	human	P–	
NCI-H82	HTB-175	human	P–	
Platelet-derived growth factor beta polypeptide (simian sarcoma viral (v-*sis*) oncogene homolog): **PDGFB, 5155**				
COLO 201	CCL-224	human	O+	
DLD-1	CCL-221	human	O+	
HT-29	HTB-38	human	O+	
LoVo	CCL-229	human	O–	
LS 174T	CL-188	human	O–	
MSTO-211H	CRL-2081	human	O–	v-*sis*
NCI-H23	CRL-5800	human	O+	
NCI-H661	HTB-183	human	O+	
NCI-H69	HTB-119	human	O–	
NCI-H82	HTB-175	human	O–	
SK-CO-1	HTB-39	human	O+	
SW1116	CCL-233	human	O+	
SW1417	CCL-238	human	O+	
SW480	CCL-228	human	O+	
SW620	CCL-227	human	O+	
SW948	CCL-237	human	O–	
116	HB-9367†	mouse/mouse	MAb	Anti PDGF beta, v-*sis* form
232	HB-9372†	mouse/mouse	MAb	Anti PDGF beta, v-*sis* form
52	HB-9361†	mouse/mouse	MAb	Anti PDGF beta, v-*sis* form
Platelet-derived growth factor receptor, alpha polypeptide: **PDGFRA, 5156**				
NCI-H23	CRL-5800	human	R–	
NCI-H661	HTB-183	human	R–	
NCI-H69	HTB-119	human	R+	
NCI-H82	HTB-175	human	R–	
Platelet-derived growth factor receptor, beta polypeptide: **PDGFRB, 5159**				
NCI-H23	CRL-5800	human	R–	
NCI-H661	HTB-183	human	R–	
NCI-H69	HTB-119	human	R–	
NCI-H82	HTB-175	human	R–	
Platelet/endothelial cell adhesion molecule: **Pecam, 18613**				
EOMA	CRL-2586	mouse	A+	
Placental lactogen. *See* Chorionic somatomammotropin hormone 1.				

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Polymerase (DNA directed), alpha: **POLA, 5422** OR alpha (70kD): **POLA2, 23649**				
SJK-132-20	CRL-1640	mouse/mouse	MAb	Anti human DNA polymerase alpha
SJK-237-71	CRL-1645	mouse/mouse	MAb	Anti human DNA polymerase alpha
SJK-287-38	CRL-1644	mouse/mouse	MAb	Anti human DNA polymerase alpha
STK 1	CRL-1652	mouse/mouse	MAb	Anti human DNA polymerase alpha
Polymerase (DNA directed), epsilon: **POLE, 5426**				
3C5.1	CRL-2284	mouse/mouse	MAb	Anti human DNA polymerase epsilon
Polypyrimidine tract binding protein 1: **PTBP1, 5725**				
mAb BB7	CRL-2501	mouse/mouse	MAb	Anti PTB
pRB. *See* Retinoblastoma 1.				
4-Pregnen-3-one(20-hydroxy)				
I-10	CCL-83	mouse	P+	
Preproenkephalin 1: **Penk1, 18619**				
N1E-115	CRL-2263	mouse	R+	
Procollagen. *See* Collagen.				
Progesterone receptor: **PGR, 5241**				
HCC1008	CRL-2320	human	R–	
HCC1143	CRL-2321	human	R–	
HCC1187	CRL-2322	human	R–	
HCC1395	CRL-2324	human	R–	
HCC1419	CRL-2326	human	R–	
HCC1500	CRL-2329	human	R+	
HCC1569	CRL-2330	human	R–	
HCC1599	CRL-2331	human	R–	
HCC1806	CRL-2335	human	R–	
HCC1937	CRL-2336	human	R–	
HCC1954	CRL-2338	human	R–	
HCC202	CRL-2316	human	R–	
HCC2157	CRL-2340	human	R+	
HCC2218	CRL-2343	human	R+	
HCC38	CRL-2314	human	R–	
HCC70	CRL-2315	human	R–	
NIH:OVCAR-3	HTB-161	human	R+	
T-47D	HTB-133	human	R+	Responsive
UACC-812	CRL-1897	human	R–	
Progesterone receptor: **Pgr, 18667**				
TM3	CRL-1714	mouse	R+	
TM4	CRL-1715	mouse	R+	
Progesterone, product				
BeWo	CCL-98	human	P+	
ChaGo-K-1	HTB-168	human	P+	
JAR	HTB-144	human	P+	
JEG-3	HTB-36	human	P+	
I-10	CCL-83	mouse	P+	
MLTC-1	CRL-2065	mouse	P+	
R2C	CCL-97	rat	P+	
Prohormone convertases PC1/3 and P2				
HP75	CRL-2506	human	P+	
Prolactin: **Prl, 19109**				
CW13.20-3B3	CRL-1669	mouse	P+	
Prolactin: **Prl, 24683**				
GH_1	CCL-82	rat	P+	
GH_3	CCL-82.1	rat	P+	
GH_4C_1	CCL-82.2	rat	P+	
MMQ	CRL-10609†	rat	P+	
RC-4B/C	CRL-1903	rat	P+	
Prolactin receptor: **PRLR, 5618**				
T-47D	HTB-133	human	R+	
Proopiomelanocortin (adrenocorticotropin/beta-lipotropin/alpha-melanocyte stimulating hormone/beta-melanocyte stimulating hormone/beta-endorphin): **POMC, 5443**				

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
DMS 79	CRL-2049	human	P+	
Proprotein convertase subtilisin/kexin type 1: **Pcsk1, 18548** OR ectonucleotide pyrophosphatase/phosphodiesterase 1: **Enpp1, 18605**				
C1.18.4	TIB-11	mouse	A+	
J558	TIB-6	mouse	A+	
P1.17	TIB-10	mouse	A+	
P3.6.2.8.1	TIB-8	mouse	A+	
S194/5.XXO-1	TIB-19	mouse	A+	
S194/5.XXO.BU.1	TIB-20	mouse	A+	
Prostaglandin E receptor 1 (subtype EP1), 42kD: **Ptger1, 19216** OR receptor 2 (subtype EP2): **Ptger2, 19217** OR receptor 3 (subtype EP3): **Ptger3, 19218** OR receptor 4 (subtype EP4): **Ptger4, 19219**				
N1E-115	CRL-2263	mouse	R+	
Prostaglandin E				
GCT	TIB-223	human	P+	
Prostaglandin E2 (PGE2)				
HSDM$_1$C$_1$	CCL-148	mouse	P+	
HIG-82	CRL-1832	rabbit	P+	
Prostaglandin F2a				
TM3	CRL-1714	mouse	P+	
Prostaglandins				
NMU	CRL-1743	rat	P+	
Protein tyrosine phosphatase, receptor type, C: **PTPRC, 5788**				
BC-1	CRL-2230	human	A+	
BC-2	CRL-2231	human	A+	
BC-3	CRL-2277	human	A+	
DS-1	CRL-11102†	human	A–	
GA-10	CRL-2392	human	A+	
J45.01	CRL-1990	human	A–	
NK-92	CRL-2407	human	A+	
NK-92CI	CRL-2409	human	A+	
NK-92MI	CRL-2408	human	A+	
4B2	HB-196	mouse/mouse	MAb	Anti human CD45
9.4	HB-10508†	mouse/mouse	MAb	Anti human CD45
GAP 8.3	HB-12	mouse/mouse	MAb	Anti human CD45
Protein tyrosine phosphatase, receptor type, C: **Ptprc, 19264**				
AMJ2-C11	CRL-2456	mouse	A+	
AMJ2-C8	CRL-2455	mouse	A+	
BW5147(T200$^-$a)5.2	TIB-233	mouse	A–	
EOC 13.31	CRL-2468	mouse	A+	
EOC 2	CRL-2467	mouse	A+	
EOC 20	CRL-2469	mouse	A+	
EOMA	CRL-2586	mouse	A+	
NFS-25 C-3	CRL-1695	mouse	A+	
NFS-5 C-1	CRL-1693	mouse	A+	
NFS-70 C-10	CRL-1694	mouse	A+	
PMJ2-PC	CRL-2457	mouse	A+	
PMJ2-R	CRL-2458	mouse	A+	
14.8	TIB-164	rat/mouse	MAb	Anti mouse CD45RA
I/24.D6	HB-251	rat/mouse	MAb	Anti mouse CD45RC
M1/89.18.7.HK	TIB-124	rat/mouse	MAb	Anti mouse CD45
M1/9.3.4.HL.2	TIB-122	rat/mouse	MAb	Anti mouse CD45
MB23G2	HB-220	rat/mouse	MAb	Anti mouse CD45
MB4B4	HB-223	rat/mouse	MAb	Anti mouse CD45
RA3-3A1/6.1	TIB-146	rat/mouse	MAb	Anti mouse CD45R
Protein tyrosine phosphatase, receptor type, C (species not yet curated)				
74-9-3	HB-156	mouse/mouse	MAb	Anti pig CD45
Proteoglycan 2, bone marrow (natural killer cell activator, eosinophil granule major basic protein): **PRG2, 5553**				
Clone 15 HL-60	CRL-1964	human	P+	
Prothrombin. *See* Coagulation factor II (thrombin).				

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
P-selectin. *See* Selectin P.				
v-*raf*-1 murine leukemia viral oncogene homolog 1: **RAF1, 5894**				
DMS 79	CRL-2049	human	O+	v-*raf*
MSTO-211H	CRL-2081	human	O+	c-*raf*-1
NCI-H146	HTB-173	human	O+	c-*raf* 1
NCI-H23	CRL-5800	human	O+	c-*raf*-1
NCI-H526	CRL-5811	human	O+	c-*raf* 1
NCI-H69	HTB-119	human	O+	c-*raf* 1
NCI-H82	HTB-175	human	O+	c-*raf* 1
NCI-N417	CRL-5809	human	O+	c-*raf* 1
v-Ha-*ras* Harvey rat sarcoma viral oncogene homolog: **HRAS, 3265**				
COLO 201	CCL-224	human	O+	*ras* +
DLD-1	CCL-221	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
DMS 79	CRL-2049	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
HT-29	HTB-38	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
J82	HTB-1	human	O+	H-*ras* +
LoVo	CCL-229	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
LS 174T	CL-188	human	O+	H-*ras* +; K-*ras* -; N-*ras* +
MSTO-211H	CRL-2081	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H146	HTB-173	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H23	CRL-5800	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H526	CRL-5811	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H69	HTB-119	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H82	HTB-175	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-N417	CRL-5809	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SK-CO-1	HTB-39	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW1116	CCL-233	human	O+	H-*ras* +; K-*ras* +; N-*ras* –
SW1417	CCL-238	human	O+	H-*ras* +; K-*ras* –; N-*ras* –
SW480	CCL-228	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW620	CCL-227	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW948	CCL-237	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
T24	HTB-4	human	O+	H-*ras* +
WR21	CRL-2189	mouse	O+ (human)	c-H-*ras* + (human)
Sarcospan (K-*ras* oncogene-associated gene): **SSPN, 8082** OR v-Ki-*ras*2 Kirsten rat sarcoma 2 viral oncogene homolog: **KRAS2, 3845**				
Calu-1	HTB-54	human	O+	K-*ras* +
DMS 79	CRL-2049	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
HT-29	HTB-38	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
LoVo	CCL-229	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
MSTO-211H	CRL-2081	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H146	HTB-173	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H23	CRL-5800	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H526	CRL-5811	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H69	HTB-119	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H82	HTB-175	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-N417	CRL-5809	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
Panc 02.03	CRL-2553	human	O+	K-*ras* +
Panc 02.13	CRL-2554	human	O+	K-*ras* +
Panc 03.27	CRL-2549	human	O+	K-*ras* +
Panc 08.13	CRL-2551	human	O+	K-*ras* +
Panc 10.05	CRL-2547	human	O+	K-*ras* +
PL45	CRL-2558	human	O+	K-*ras* +
SK-CO-1	HTB-39	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW1116	CCL-233	human	O+	H-*ras* +; K-*ras* +; N-*ras* –
SW1417	CCL-238	human	O+	H-*ras* +; K-*ras* –; N-*ras* –
SW480	CCL-228	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW620	CCL-227	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW948	CCL-237	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
Neuroblastoma Ras viral (v-*ras*) oncogene homolog: **NRAS, 4893**				
DLD-1	CCL-221	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
DMS 79	CRL-2049	human	O+	H-*ras* +; K-*ras* +; N-*ras* +

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HT-1080	CCL-121	human	O+	N-*ras*
HT-29	HTB-38	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
LoVo	CCL-229	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
MSTO-211H	CRL-2081	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H146	HTB-173	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H23	CRL-5800	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H526	CRL-5811	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H69	HTB-119	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-H82	HTB-175	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
NCI-N417	CRL-5809	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
PA-1	CRL-1572	human	O+	N-*ras* +
SK-CO-1	HTB-39	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW1116	CCL-233	human	O+	H-*ras* +; K-*ras* +; N-*ras* –
SW1417	CCL-238	human	O+	H-*ras* +; K-*ras* –; N-*ras* –
SW480	CCL-228	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW620	CCL-227	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
SW948	CCL-237	human	O+	H-*ras* +; K-*ras* +; N-*ras* +
ras				
142-24E5	CRL-2649	mouse/mouse	MAb	Anti *ras*, H/N, peptide, synthetic
146-03E04	CRL-2650	mouse/mouse	MAb	Anti *ras* oncogene peptide, synthetic
147-67C6	CRL-2654	mouse/mouse	MAb	Anti synthetic v-*ras* K oncogene peptide
MX	HB-9158†	mouse/mouse	MAb	Anti *ras*, Ha, p21
Y13-238	CRL-1741	rat/mouse	MAb	Anti *ras* (v-*ras*) protein, p21
Y13-259	CRL-1742	rat/mouse	MAb	Anti *ras* (v-*ras*) protein, p21
Renin 1 structural: **Ren1, 19701**				
SCA-9 clone 15	CRL-1734	mouse	P+	
As4.1	CRL-2193	mouse	P+	
Renin (species not yet curated)				
F32 VIII C4	CRL-1653	mouse/mouse	MAb	Anti hog rennin
REP-1. *See* Choroideremia (Rab escort protein 1).				
Retinal pigment epithelium-specific protein: **RPE65, 6121**				
ARPE-19	CRL-2302	human	A+	
ARPE-19/HPV-16	CRL-2502	human	A+	
Retinaldehyde binding protein 1: **RLBP1, 6017**				
ARPE-19	CRL-2302	human	A+	
ARPE-19/HPV-16	CRL-2502	human	A+	
Retinol binding protein (seven retinol binding proteins)				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
TM4	CRL-1715	mouse	P+	
Retinol binding protein 1, cellular: **RBP1, 5947**				
Caco-2	HTB-37	human	P+	
Retinol binding protein 2, cellular: **RBP2, 5948**				
Caco-2	HTB-37	human	P+	
Retinoblastoma 1 (including osteosarcoma): **RB1, 5925**				
C-33 A	HTB-31	human	O+	
HT-3	HTB-32	human	O+	
ME-180	HTB-33	human	O+	
NCI-H209	HTB-172	human	O+	
SiHa	HTB-35	human	O+	
Ribonuclease, RNase A family, 2 (liver, eosinophil-derived neurotoxin): **RNASE2, 6036**				
Clone 15 HL-60	CRL-1964	human	P+	
Ribonuclease, RNase A family, 3 (eosinophil cationic protein): **RNASE3, 6037**				
Clone 15 HL-60	CRL-1964	human	P+	
v-*ros* UR2 sarcoma virus oncogene homolog 1 (avian): **ROS1, 6098**				
COLO 201	CCL-224	human	O–	
DLD-1	CCL-221	human	O–	
HT-29	HTB-38	human	O–	
LoVo	CCL-229	human	O–	

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v-*ros* UR2 sarcoma virus oncogene homolog 1 (avian) continued				
LS 174T	CL-188	human	O–	
SK-CO-1	HTB-39	human	O–	
SW1116	CCL-233	human	O–	
SW1417	CCL-238	human	O–	
SW480	CCL-228	human	O–	
SW620	CCL-227	human	O–	
SW948	CCL-237	human	O–	
S-100 protein (seventeen S-100 proteins)				
D283 Med	HTB-185	human	P–	
D341 Med	HTB-187	human	P–	
Daoy	HTB-186	human	P–	
DBTRG-05MG	CRL-2020	human	P+	
LN-18	CRL-2610	human	P+	
C_6	CCL-107	rat	P+	
EGC/PK060399egfr	CRL-2690	rat	P+	
Sarcospan. *See* K-*ras* oncogene-associated gene.				
Scavenger receptor class F, member 1: **Scatf1, 53979**				
C166	CRL-2581	mouse	R+	
EOMA	CRL-2586	mouse	R+	
Secreted phosphoprotein 1: **Spp1, 20750**				
MC3T3-E1 Subclone 14	CRL-2594	mouse	P+	
MC3T3-E1 Subclone 24	CRL-2595	mouse	P–	
MC3T3-E1 Subclone 30	CRL-2596	mouse	P–	
MC3T3-E1 Subclone 4	CRL-2593	mouse	P+	
Secreted protein, acidic, cysteine-rich (osteonectin): **SPARC, 6678**				
NE	CRL-2070	mouse	P+	
Selectin E (endothelial adhesion molecule 1): **SELE, 6401**				
CL2	CRL-2514	mouse/mouse	MAb	Anti human E-selectin (CD62E)
CL3	CRL-2515	mouse/mouse	MAb	Anti human E-selectin (CD62E)
CL37	CRL-2516	mouse/mouse	MAb	Anti human E-selectin (CD62E)
H18/7	HB-11684†	mouse/mouse	MAb	Anti human E-selectin (ELAM-1, CD62E)
Selectin L (lymphocyte adhesion molecule 1): **SELL, 6402**				
1H3	HB-284	mouse/mouse	MAb	Anti human CD62L
DREG56	HB-300	mouse/mouse	MAb	Anti human L-selectin (CD62L, LECAM, LAM-1, Leu-8)
DREG200	HB-302	mouse/mouse	MAb	Anti human L-selectin (CD62L, LECAM, LAM-1, Leu-8)
Selectin L (lymphocyte adhesion molecule 1): **SELL, 281485**				
DU1-29	HB-263	mouse/mouse	MAb	Anti sheep and bovine CD62L
Selectin, lymphocyte: **Sell, 20343**				
MEL-14	HB-132	rat/mouse	MAb	Anti mouse equivalent to human L-selectin, CD62L, Leu-8)
Selectin P (granule membrane protein 140kD, antigen CD62): **SELP, 6043**				
WAPS 12.2	HB-299	mouse/mouse	MAb	Anti human P-selectin (CD62P)
Serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 3: **SERPINA3, 12**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Serotonin. *See* 5-Hydroxytryptamine (serotonin).				
Serum albumin. *See* Albumin.				
Sialomucin. *See* CD164 antigen.				
sis. *See* Platelet-derived growth factor, beta polypeptide				
Somatostatin receptor 1: **Smstr1, 20605** OR receptor 2: **Smstr2, 20606** OR receptor 3: **Smstr3, 20607** OR receptor 4: **Smstr4, 20608** OR receptor 5: **Smstr5, 20609**				
N1E-115	CRL-2263	mouse	R+	

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Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Somatostatin (hamster gene not yet curated)				
HIT-T15	CRL-1777	Syrian golden hamster	R+	Sensitive
Somatostatin: **SST, 6750**				
DMS 53	CRL-2062	human	P+	Somatostatin-like immunoreactivity (SRIF)
DMS 79	CRL-2049	human	P+	Somatostatin-like immunoreactivity (SRIF)
HCN-1A	CRL-10442†	human	P+	
HCN-2	CRL-10742†	human	P+	
Somatostatin: **Smst, 20604**				
β-TC-6	CRL-11506†	mouse	P+	
MTC-M	CRL-1806	mouse	P+	
N1E-115	CRL-2263	mouse	P+	
NIT-1	CRL-2055	mouse	P–	
TGP47	CRL-2141	mouse	P–	
TGP49	CRL-2136	mouse	P–	
TGP52	CRL-2140	mouse	P+	
TGP55	CRL-2150	mouse	P+	
TGP61	CRL-2135	mouse	P+	Not secreted
Somatostatin: **Sst, 24797**				
RIN-14B	CRL-2059	rat	P+	
RIN-5F	CRL-2058	rat	P–	
RIN-m	CRL-2057	rat	P+	
RIN-m5F	CRL-11605†	rat	P–	
Somatotrophin. *See* Growth hormone 1.				
Spleen tyrosine kinase: **SYK, 6850**				
P116	CRL-2676	human	P–	
P116.cl39 [P116.c39]	CRL-2677	human	P–	
Splicing factor, arginine/serine-rich 2: **SFRS2, 6427**				
Anti-SC35	CRL-2031	mouse/mouse	MAb	Anti mammalian splicing factor (SC35)
v-*src* sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian): **SRC, 6714**				
COLO 201	CCL-224	human	O–	
DLD-1	CCL-221	human	O–	
HT-29	HTB-38	human	O–	
LoVo	CCL-229	human	O–	
LS 174T	CL-188	human	O–	
MSTO-211H	CRL-2081	human	O+	v-*src*
NCI-H23	CRL-5800	human	O+	v-*src*
SK-CO-1	HTB-39	human	O–	
SW1116	CCL-233	human	O–	
SW1417	CCL-238	human	O–	
SW480	CCL-228	human	O–	
SW620	CCL-227	human	O–	
SW948	CCL-237	human	O–	
SYF	CRL-2459	mouse	O–	
201-45E9	CRL-2670	mouse/mouse	MAb	Anti synthetic v-*src* oncogene peptide
202-11A8	CRL-2669	mouse/mouse	MAb	Anti SRC/YES synthetic oncogene peptide
203-7D10	CRL-2651	mouse/mouse	MAb	Anti synthetic v-*src* oncogene peptide
SREBP cleavage-activating protein: **SCAP, 22937** (human; hamster gene not yet curated)				
IgG-9D5	CRL-2347	mouse/mouse	MAb	Anti hamster SCAP
Stem cell antigen 1 (Sca-1). *See* Lymphocyte antigen 6 complex, locus A				
Stem cell factor (SCF). *See kit*.				
Steroid hormones				
NCI-H295	CRL-10296†	human	P+	
Y-1	CCL-79	mouse	P+	
LC-540	CCL-43	rat	P+	
R2C	CCL-97	rat	P+	

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Sterol regulatory element binding transcription factor 1: **SREBF1, 6720** OR transcription factor 2: **SREBF2, 6721**				
IgG-2A4	CRL-2121	mouse/mouse	MAb	Anti human SREBP
Sterol regulatory element binding protein (SREBP) (species not yet curated)				
IgG-3B2	CRL-2693	mouse/mouse	MAb	Anti *Drosophila* dSREBP
Sterol regulatory element binding transcription factor 2: **SREBF2, 6721**				
IgG-1C6	CRL-2224	mouse/mouse	MAb	Anti human SREBP 2
IgG-1D2	CRL-2545	mouse/mouse	MAb	Anti human SREBP 2
Sterol regulatory element binding protein (SREBP2)				
IgG-7D4	CRL-2198	mouse/mouse	MAb	Anti hamster SREBP2
Surfactant, pulmonary-associated protein A1: **SFTPA1, 6435**				
NCI-H1404	CRL-5819	human	P+	mRNA and protein
NCI-H358	CRL-5807	human	P+	mRNA and protein
NCI-H441	HTB-174	human	P+	mRNA and protein
NCI-H820	HTB-181	human	P+	
Surfactant, pulmonary-associated protein B: **SFTPB, 6439**				
NCI-H1404	CRL-5819	human	P+	mRNA and protein
NCI-H358	CRL-5807	human	P–	
NCI-H820	HTB-181	human	P+	
Surfactant-associated protein B: **Sftpb, 20388**				
MLE 12	CRL-2110	mouse	P+	
Surfactant, pulmonary-associated protein A1: **SFTPA1, 6435** OR protein B: **SFTPB, 6439** (human; canine gene not yet curated)				
DS-1	HB-8906†	mouse/mouse	MAb	Anti canine ASP
DS-3	HB-8651†	mouse/mouse	MAb	Anti canine ASP
DS-5	HB-8653†	mouse/mouse	MAb	Anti canine ASP
DS-6	HB-8652†	mouse/mouse	MAb	Anti canine ASP
Surfactant-associated protein C: **Sftpc, 6440**				
NCI-H1404	CRL-5819	human	P–	
NCI-H358	CRL-5807	human	P–	
NCI-H820	HTB-181	human	P+	
Surfactant-associated protein C: **Sftpc, 20389**				
MLE 12	CRL-2110	mouse	P+	
Synaptophysin: **Syp, 20977**				
CATH.a	CRL-11179†	mouse	P+	
T cell antigen receptor (TCR)				
29SR	CRL-2262	human	R–	
HT	CRL-2260	human	R–	
J45.01	CRL-1990	human	R+	
J.CaM1.6	CRL-2063	human	R+	TCR signal transduction is defective.
J.RT3-T3.5	TIB-153	human	R–	Lacks the beta chain of the T cell antigen receptor
Jurkat, Clone E6-1	TIB-152	human	R+	
RL	CRL-2261	human	R–	
145-2C11	CRL-1975	mouse/mouse complex	MAb	Anti mouse T cell receptor (CD3 - T3)
(BF1) 8A3.31	HB-9283†	mouse/mouse	MAb	Anti human T cell antigen receptor, major framework determinant
C305	CRL-2424	mouse/mouse receptor on Jurkat cells	MAb	Anti beta chain of the T cell antigen
H57-597	HB-218	rat/mouse	MAb	Anti mouse T cell antigen receptor
TR 310	HB-219	rat/mouse	MAb	Anti mouse T cell antigen receptor
W4F.5B	HB-9282†	mouse/mouse	MAb	Anti human T cell antigen receptor, major framework determinant
T cell receptor alpha locus: **TRA@, 6955** AND beta locus: **TRB@, 6957**				
TALL-104	CRL-11386†	human	R+	T cell antigen receptor alpha/beta (TCR)
T cell receptor alpha locus: **TRA@, 6955** OR beta locus: **TRB@, 6957**				
J.RT3-T3.5	TIB-153	human	R–	T cell antigen receptor

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Genes and Bioactive Compounds

Name: Symbol, GeneID

Cell Line Name	ATCC® No.	Species	Expresses	Comments
T cell antigen receptor gamma/delta (TCR)				
86D	HB-286	mouse/mouse	MAb	Anti sheep gamma/delta T cell receptor
UC3-10A6	CRL-1988	Armenian hamster/ mouse	MAb	Anti mouse gamma/delta T cell receptor (TCR)
UC7-13D5	CRL-1989	Armenian hamster/ mouse	MAb	Anti mouse gamma/delta T cell receptor (TCR)
T cell growth factor 2 (TCGF2)				
Cl. $Ly1^+2^-$/9	CRL-8179†	mouse	P+	
T cell precursor				
OKT 10	CRL-8022†	mouse/mouse	MAb	Anti human T cell precursor
T200. *See* Protein tyrosine phosphatase, receptor type C.				
TAG-72				
NCI-H498	CCL-254	human	A+	
NCI-H508	CCL-253	human	A–	
NCI-H548	CCL-249	human	A–	
NCI-H716	CCL-251	human	A–	
NCI-H747	CCL-252	human	A–	
NCI-N87	CRL-5822	human	A+	
SNU-1	CRL-5971	human	A+	
SNU-16	CRL-5974	human	A+	
SNU-5	CRL-5973	human	A+	
SNU-C2A	CCL-250.1	human	P+	
CC 49	HB-9459†	mouse/mouse	MAb	Anti human TAG-72
Terminal deoxynucleotidyl transferase (TdT). *See* Deoxynucleotidyltransferase, terminal.				
TGF. *See* Transforming growth factor.				
ThB. *See* Lymphocyte antigen 6 complex, locus D.				
Thrombin. *See* Coagulation factor II (thrombin) receptor.				
Thrombospondin				
EOMA	CRL-2586	mouse	P+	
Thy-1 cell surface antigen: **THY1, 7070**				
K117	HB-8553†	mouse/mouse	MAb	Anti human Thy-1
Thymus cell antigen 1, theta: **Thy1, 21838**				
AKR1.G.1.OVA^R.1.26	TIB-232	mouse	A+	Thy-1
AMJ2-C11	CRL-2456	mouse	A–	Thy-1
AMJ2-C8	CRL-2455	mouse	A–	Thy-1
BW5147.3	TIB-47	mouse	A+	Thy-1.1
EL4	TIB-39	mouse	A+	Thy-1.2
EL4.BU	TIB-40	mouse	A+	Thy-1.2
EL4.BU.1.OUA^r.1.1	TIB-41	mouse	A+	Thy-1.2
FDC-P1	CRL-12103†	mouse	A+	Thy-1.2
HT-2 clone A5E	CRL-1841	mouse	A+	Thy-1
PMJ2-PC	CRL-2457	mouse	A–	Thy-1.2
PMJ2-R	CRL-2458	mouse	A–	Thy-1.2
R1.1	TIB-42	mouse	A+	Thy-1.2
R1E/TL8x.1	TIB-43	mouse	A+	Thy-1.2
R1.G1	TIB-44	mouse	A+	Thy-1.2
S1A.TB.4.8.2	TIB-27	mouse	A+	Thy-1.2
S1A(Thy-1^-b)	TIB-231	mouse	A–	Thy-1.1
S49.1	TIB-28	mouse	A+	Thy-1.2
S49.1H.1AG.6/2	TIB-29	mouse	A+	Thy-1.2
S49.1G.3	TIB-34	mouse	A+	Thy-1.2
S49.1G.3 PHA.100/0	TIB-35	mouse	A+	Thy-1.2
S49.1TB.2	TIB-30	mouse	A+	Thy-1.2
S49.1TB.4 DEX R.63	TIB-33	mouse	A+	Thy-1.2
TIMI.4	TIB-37	mouse	A+	Thy-1.2
TIMI.4G.1.3	TIB-38	mouse	A+	Thy-1.2
WEHI 7.1	TIB-53	mouse	A+	Thy-1.2
WEHI 22.1	TIB-54	mouse	A+	Thy-1.2
WR19L	TIB-52	mouse	A+	Thy-1.2
EGC/PK060399egfr	CRL-2690	rat	A–	Thy-1.1
30-H12	TIB-107	rat/mouse	MAb	Anti mouse Thy-1.2

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Genes and Bioactive Compounds

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Thymus cell antigen 1, theta continued				
HO-13-4	TIB-99	mouse/mouse	MAb	Anti mouse Thy-1.2
HO-22-1	TIB-100	rat/mouse	MAb	Anti mouse Thy-1
J1j.10	TIB-184	rat/mouse	MAb	Anti mouse Thy-1.2
M5/49.4.1	TIB-238	rat/mouse	MAb	Anti mouse Thy-1
T11D7e2	TIB-103	mouse/mouse	MAb	Anti mouse Thy-1.1
Thyroglobulin: **Tg, 24826**				
FRTL	CRL-1468	rat	P+	
Thyrotropin-releasing hormone: **TRH, 7200**				
DMS 53	CRL-2062	human	P+	
Thyroid stimulating hormone (TSH) receptor alpha. *See* Glycoprotein hormones, alpha polypeptide.				
Thyroid stimulating hormone, beta: **TSHB, 7252**				
TSHR-R5T-34	CRL-2683	mouse/mouse	MAb	Anti human TSH receptor beta
TSHR-T3-365	CRL-2684	mouse/mouse	MAb	Anti human TSH receptor beta
Thyroid stimulating hormone, beta: TSH-beta: Product				
RC-4B/C	CRL-1903	rat	P+	
Tight junction protein 1 (zona occludens 1): **TJP1, 7082** (human; rat gene not yet curated)				
RPE-J	CRL-2240	rat	P+	
Tissue inhibitor of bioreactive matrix metalloproteinase				
MS1 (MILE SVEN 1)	CRL-2279	mouse	P+	
SVR (SVEN 1 *ras*)	CRL-2280	mouse	P+	
Tissue plasminogen activator (t-PA). *See* Plasminogen activator, tissue.				
TL antigen				
R1.1	TIB-42	mouse	A+	
R1.G1	TIB-44	mouse	A+	
S49.1	TIB-28	mouse	A+	
S49.1G.3	TIB-34	mouse	A+	
S49.1G.3 PHA.100/0	TIB-35	mouse	A+	
S49.1H.1AG.6/2	TIB-29	mouse	A+	
S49.1TB.2	TIB-30	mouse	A+	
S49.1TB.4 DEX R.63	TIB-33	mouse	A+	
S49 (Thy-1-a)	TIB-36	mouse	A+	
HD168	HB-252	rat/mouse	MAb	Anti mouse TL antigen
I(TL.m9)	HB-131	mouse/mouse	MAb	Anti mouse TL antigen
Transducing vector				
CRE BAG 2	CRL-1858	mouse	P+	Beta-galactosidase transducing vector (BAG)
ψ 2 DAP	CRL-1949	mouse	P+	Placental alkaline phosphatase transducing vector
Ψ 2 BAG alpha	CRL-9560†	mouse	P+	Beta-galactosidase transducing vector (BAG)
PG13/LN c8	CRL-10685†	mouse	P+	GaLV-based neomycin resistance transducing vector
Transferrin: **TF, 7018**				
C3A	CRL-10741†	human	P+	
Hep 3B2.1-7	HB-8064†	human	P+	
Hep G2	HB-8065†	human	P+	
Transferrin: **Trf, 22041**				
AML12	CRL-2254	mouse	P+	
TM4	CRL-1715	mouse	P+	
Transferrin: **Tf, 24825**				
CTX TNA2	CRL-2006	rat	P+	
DI TNC_1	CRL-2005	rat	P+	
H4-II-E-C3	CRL-1600	rat	P+	
Transferrin receptor (p90, CD71): **TFRC, 7037**				
8E5	CRL-8993†	human	R+	
BC-3	CRL-2277	human	A+	
NCI-H929	CRL-9068†	human	R+	
SUP-B15	CRL-1929	human	A+	
SUP-T1 [VB]	CRL-1942	human	R–	
5E9C11	HB-21	mouse/mouse	MAb	Anti human transferrin receptor

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L5.1	HB-84	mouse/mouse	MAb	Anti human transferrin receptor
OKT 9	CRL-8021†	mouse/mouse	MAb	Anti human transferrin receptor
Transferrin receptor: **Trfr, 22042**				
R17 208.2	TIB-220	rat/mouse	MAb	Anti mouse transferrin receptor
R17 217.1.3	TIB-219	rat/mouse	MAb	Anti mouse transferrin receptor
Transforming growth factor, alpha: **TGFA, 7039**				
AML12	CRL-2254	mouse	P+ (human)	
NCI-H23	CRL-5800	human	P+	
SW620	CCL-227	human	P+	
Transforming growth factor, alpha: **Tgfa, 24827**				
FAT 7	CRL-2109	rat	P+	
Transforming growth factor, alpha: receptor				
MDA-MB-231	HTB-26	human	R+	
MDA-MB-468	HTB-132	human	R+	
NCI-H23	CRL-5800	human	R+	
NCI-H661	HTB-183	human	R–	
Transforming growth factor, beta1 (Camurati-Engelmann disease): **TGFB1, 7040** OR beta2: **TGFB2, 7042** OR beta3: **TGFB3, 7043**				
SW480	CCL-228	human	P+	
WiDr	CCL-218	human	P+	
Transforming growth factor, beta1: **Tgfb1, 59086** OR beta 2: **Tgfb2, 81809** OR beta 3: **Tgfb3, 25717**				
NR8383	CRL-2192	rat	P+	
Transforming growth factor, beta1 (Camurati-Engelmann disease): **TGFB1, 7040**				
HCT 116	CCL-247	human	P+	
HP75	CRL-2506	human	P+	
LS1034	CRL-2158	human	P–	
LS411N	CRL-2159	human	P+	
LS513	CRL-2134	human	P+	
Transforming growth factor, beta 2: **TGFB2, 7042**				
HCT 116	CCL-247	human	P+	
HP75	CRL-2506	human	P+	
Transforming growth factor, beta 2 (species not yet curated)				
1D11.16.8	HB-9849†	mouse/mouse	MAb	Anti bovine transforming growth factor beta 2 (TGF-beta 2)
Transforming growth factor, beta 3: **TGFB3, 7043**				
HP75	CRL-2506	human	P+	
Transforming growth factor, beta receptor I (activin A receptor type II-like kinase, 53kD): **TGFBR1, 7046** OR receptor II (70-80kD): **TGFBR2, 7048** OR receptor III (beta glycan, 300kD): **TGFBR3, 7049**				
DMS 53	CRL-2062	human	R+	
NCI-H23	CRL-5800	human	R+	
NCI-H661	HTB-183	human	R+	
Transforming growth factor, beta receptor I (activin A receptor type II-like kinase, 53kD): **TGFBR1, 7046**				
MG-63	CRL-1427	human	R+	
HP75	CRL-2506	human	R+	
Saos-2	HTB-85	human	R+	
Transforming growth factor, beta receptor II (70-80kD): **TGFBR2, 7048**				
HP75	CRL-2506	human	R+	
MG-63	CRL-1427	human	R+	
Saos-2	HTB-85	human	R+	
Transforming growth factor, beta receptor III (beta-glycan, 300kD): **TGFBR3, 7049**				
HP75	CRL-2506	human	R+	
Transforming growth factor, beta binding protein. *See* Latent transforming growth factor beta binding protein.				
Tropomyosin 1 (alpha): **TPM1, 7168** (human; quail gene not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Tropomyosin 2 (beta): **TPM2, 7169**				
162-46.2	HB-187	mouse/mouse	MAb	Anti human trop-2 antigen

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Genes and Bioactive Compounds

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Troponin C, slow: **TNNC1, 7134** (human; quail gene not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Troponin T2, cardiac: **TNNT2, 7139** (human; quail gene not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Troponin I, skeletal, slow: **TNNI1, 7135** OR fast: **TNNI2, 7136** (human; quail gene not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Troponin T1, skeletal, slow: **TNNT1, 7138** OR T3, skeletal, fast: **TNNT3, 7140** (human; quail gene not yet curated)				
QM7	CRL-1962	Japanese quail	P+	
Tubulin				
HCN-1A	CRL-10442†	human	P+	
HCN-2	CRL-10742†	human	P+	
MDA-MB-330	HTB-127	human	P+	
MDA-MB-435S	HTB-129	human	P+	
MDA-MB-436	HTB-130	human	P+	
Neuro-2a	CCL-131	mouse	P+	
RL-65	CRL-10354†	rat	P+	
Tumor-associated antigen				
Ca Ski	CRL-1550	human	P+	
Tumor-associated calcium signal transducer 1: **TACSTD1, 4072**				
HCC1008	CRL-2320	human	P+	
HCC1143	CRL-2321	human	P+	
HCC1187	CRL-2322	human	P+	
HCC1395	CRL-2324	human	P+	
HCC1419	CRL-2326	human	P+	
HCC1428	CRL-2327	human	P+	
HCC1500	CRL-2329	human	P+	
HCC1569	CRL-2330	human	P+	
HCC1599	CRL-2331	human	P+	
HCC1806	CRL-2335	human	P+	
HCC1937	CRL-2336	human	P+	
HCC1954	CRL-2338	human	P+	
HCC202	CRL-2316	human	P+	
HCC2157	CRL-2340	human	P+	
HCC2218	CRL-2343	human	P+	
HCC38	CRL-2314	human	P+	
HCC70	CRL-2315	human	P+	
Tumor necrosis factor (TNF superfamily, member 2): **TNF, 7124**				
HL-60	CCL-240	human	P+	
HuT 78	TIB-161	human	P+	
SK-N-FI	CRL-2142	human	P+, R+	Responsive
TALL-104	CRL-11386†	human	P+	
U-937	CRL-1593.2	human	P+	
H36.12j	CRL-2449	mouse	P+	Upon direct beryllium stimulation
Tumor necrosis factor receptor superfamily, member 1a: **Tnfrsf1a, 21937**				
9TR#1	CRL-11379†	mouse	R–	Disrupted receptor (TNFR) p55 gene
Tumor necrosis factor receptor superfamily, member 5: **TNFRSF5, 958**				
Farage	CRL-2630	human	A+	
GA-10	CRL-2392	human	A+/–	10% positive
3A8	HB-12024†	mouse/mouse	MAb	Anti human CD40
G28-5	HB-9110	mouse/mouse	MAb	Anti Bp50 (CD40, human B cell antigen)
Tumor necrosis factor (ligand) superfamily, member 5 (hyper-IgM syndrome): **TNFSF5, 959**				
5c8	HB-10916†	mouse/mouse	MAb	Anti human CD40L ligand
hCD40L-M90	HB-12055†	mouse/mouse	MAb	Anti human CD40L ligand
hCD40L-M91	HB-12056†	mouse/mouse	MAb	Anti human CD40L ligand
Tumor necrosis factor (ligand) superfamily, member 5: **Tnfsf5, 21947**				
MR1	CRL-2580	Armenian hamster/mouse	MAb	Anti mouse CD40L ligand
Tumor necrosis factor receptor superfamily, member 6: **TNFRSF6, 356**				
U-937	CRL-1593.2	human	A+	

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Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
VA-ES-BJ	CRL-2138	human	A+	
huFasM3	HB-11726†	mouse/mouse	MAb	Anti human Fas
huFasM38	HB-11465†	mouse/mouse	MAb	Anti human Fas
Tumor necrosis factor receptor superfamily, member 8: **TNFRSF8, 943**				
BC-1	CRL-2230	human	A+	
BC-3	CRL-2277	human	A+	
DS-1	CRL-11102†	human	A–	
HH	CRL-2105	human	A+	
Tumor protein p53 (Li-Fraumeni syndrome): **TP53, 7157**				
AU565	CRL-2351	human	O+	
C-33 A	HTB-31	human	O+	Point mutation at codon 273 resulting in a Arg → Cys substitution.
COLO 201	CCL-224	human	O+	
DLD-1	CCL-221	human	O+	C → T mutation resulting in Ser → Phe at position 241.
HCC38	CRL-2314	human	O+	
HCC70	CRL-2315	human	O+	Overexpressed
HCC1008	CRL-2320	human	O+	
HCC1143	CRL-2321	human	O+	
HCC1187	CRL-2322	human	O+	Overexpressed
HCC1395	CRL-2324	human	O+	
HCC1419	CRL-2326	human	O–	
HCC1428	CRL-2327	human	O–	
HCC1500	CRL-2329	human	O+	
HCC1569	CRL-2330	human	O–	
HCC1599	CRL-2331	human	O–	
HCC1806	CRL-2335	human	O–	
HCC1937	CRL-2336	human	O–	
HCC202	CRL-2316	human	O–	
HCC2157	CRL-2340	human	O+	
HCC2218	CRL-2343	human	O+	
HP75	CRL-2506	human	O+	Overexpressed
HT-29	HTB-38	human	O+	G → A mutation in codon 273 resulting in an Arg → His substitution
HT-3	HTB-32	human	O+	Point mutation at codon 245 resulting in a Gly → Val substitution.
LN-18	CRL-2610	human	O+	TGT (Cys) → TCT (Ser) mutation at codon 238
LN-229	CRL-2611	human	O+	CCT (Pro) → CTT (Leu) mutation at codon 98
LNZTA3WT11	CRL-11544†	human	O+	Wild type
LNZTA3WT4	CRL-11543†	human	O+	Wild type
Loucy	CRL-2629	human	O+	Overexpressed; mutated, GTG → ATG mutation at codon 272
LoVo	CCL-229	human	O+	
LS1034	CRL-2158	human	O+	Gly → Ser mutation at position 245
LS 174T	CL-188	human	O+	mRNA expression
LS 180	CL-187	human	O–	
LS513	CRL-2134	human	O+	Wild type
MDA-MB-468	HTB-132	human	O+	G → A mutation in codon 273 gene resulting in an Arg → His substitution
ME-180	HTB-33	human	O+	
MOLT-4	CRL-1582	human	O+	Not expressed; G → A mutation at codon 248
NCI-H1299	CRL-5803	human	O–	Homozygous partial deletion of the p53 protein; lacks expression of p53 protein.
NCI-H187	CRL-5804	human	O+	
NCI-H209	HTB-172	human	O+	

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Cell Line Name	ATCC® No.	Species	Expresses	Comments
Name: Symbol, GeneID				
Tumor protein p53 (Li-Fraumeni syndrome) continued				
NCI-H23	CRL-5800	human	O+	Mutation in codon 246 (ATC → ATG, Ile → Met)
NCI-H345	HTB-180	human	O+	
NCI-H378	CRL-5808	human	O+	
NCI-H460	HTB-177	human	O+	
NCI-H520	HTB-182	human	O+	Underexpressed
NCI-H522	CRL-5810	human	O+	Mutation in codon 191
NCI-H526	CRL-5811	human	O+	
NCI-H596	HTB-178	human	O+	
NCI-H661	HTB-183	human	O+	
NCI-H676B	HTB-179	human	O+	Produces an abnormally sized p53 mRNA (2.3 kb) as well as the normal size mRNA (2.8 kb)
NCI-H727	CRL-5815	human	O+	
NCI-H82	HTB-175	human	O+	Produces an abnormally sized p53 mRNA (3.7 kb)
NCI-H889	CRL-5817	human	O+	Underexpressed
NCI-N417	CRL-5809	human	O+	Underexpressed
OV-90	CRL-11732†	human	O+	Ser → Arg mutation at exon 6, codon 215
PL45	CRL-2558	human	O+	Mutation at codon 255 where an ATC → AAC mutation resulted in substitution of Asx for Ile.
RKO	CRL-2577	human	O+	Wild type
RKO-AS45-1	CRL-2579	human	O+	Underexpressed
RKO-E6	CRL-2578	human	O–	Lacks appreciable functional p53
TOV-112D	CRL-11731†	human	O+	Arg → His mutation at exon 6, codon 175
TOV-21G	CRL-11730†	human	O+	Wild type
SiHa	HTB-35	human	O+	
SK-CO-1	HTB-39	human	O+	
SW1116	CCL-233	human	O+	
SW1417	CCL-238	human	O–	
SW480	CCL-228	human	O+	Mutation in codon 273 and codon 309
SW620	CCL-227	human	O+	Mutation in codon 273 resulting in an Arg → His substitution
SW837	CCL-235	human	O+	C → T mutation in codon 248 resulting in an Arg → Trp substitution
SW948	CCL-237	human	O+	
VA-ES-BJ	CRL-2138	human	O+	
WiDr	CCL-218	human	O+	G → A mutation resulting in Arg → His at position 273
Transformation related protein 53: **Trp53, 22059**				
7F2	CRL-12557†	mouse	O–	p53 knockout mouse
FAK-/-	CRL-2644	mouse	O–	
FAK+/+	CRL-2645	mouse	O–	
p53NiS1	CRL-2619	mouse	O+	Deletion in exon 5
Tumor-specific antigen				
T24	HTB-4	human	P+	
Tyrosine aminotransferase: **Tat, 24813**				
H4-II-E-C3	CRL-1600	rat	P+	
Tyrosine hydroxylase: **Th, 21823**				
NB41A3	CCL-147	mouse	P+	
N1E-115	CRL-2263	mouse	P+	
Tyrosine hydroxylase: **Th, 25085**				
CATH.a	CRL-11179†	mouse	P+ (rat)	
Ubiquitin cross-reactive protein (UCRP)				
BEND	CRL-2398	bovine	P+	
Uracil-DNA glycosylase: **UNG, 7374**				
37.04.12	HB-9312†	mouse/mouse	MAb	Anti human UDG
40.10.09	HB-9311†	mouse/mouse	MAb	Anti human UDG
42.08.07	HB-9313†	mouse/mouse	MAb	Anti human UDG

* Part of the NBL collection; see page 12. † Patent item; see page 12.
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Expresses: P = product, A = antigen, O = oncogene, R = receptor, MAb = monoclonal antibody.

Genes and Bioactive Compounds

Name: Symbol, GeneID

Cell Line Name	ATCC® No.	Species	Expresses	Comments
Urokinase receptor (u-PAR). *See* Plasminogen activator, urokinase receptor.				
v-*abl*. *See abl.*				
Vascular addressin. *See* Mucosal vascular addressin cell adhesion molecule 1.				
Vascular cell adhesion molecule 1: **VCAM1, 7412**				
HS-27A	CRL-2496	human	A+	
VIII-6G10	HB-10519†	mouse/mouse	MAb	Anti VCAM-1 of human and macaque
Vascular cell adhesion molecule 1: **Vcam1, 22329**				
2F-2B	CRL-2168	mouse	A+	
2H-11	CRL-2163	mouse	A+	
3B-11	CRL-2160	mouse	A+	
bEnd.3	CRL-2299	mouse	A+	
C166	CRL-2581	mouse	A+	
IP-1B	CRL-2162	mouse	A+	
IP2-E4	CRL-2171	mouse	A+	
SVEC4-10	CRL-2181	mouse	A+	
SVEC4-10EE2	CRL-2167	mouse	A+	
SVEC4-10EHR1	CRL-2161	mouse	A+	
M/K-1.9	CRL-1910	rat/mouse	MAb	Anti mouse VCAM-1
M/K-2.7	CRL-1909	rat/mouse	MAb	Anti mouse VCAM-1
Vascular endothelial growth factor (VEGF). *See* Kinase insert domain receptor.				
Vasoactive intestinal peptide receptor: **VIPR1, 7433**				
NCI-N87	CRL-5822	human	R+/–	
SNU-1	CRL-5971	human	R+	
SNU-16	CRL-5974	human	R+	
SNU-5	CRL-5973	human	R+	
Vasoactive intestinal peptide receptor 1: **Vipr1, 22354**				
N1E-115	CRL-2263	mouse	R+	
Vasopressin-neurophysin (VP-NT). *See* Arginine vasopressin.				
v-*erb* B. *See erb.*				
Very low density lipoprotein receptor: **VLDLR, 7436**				
IgG-6A6	CRL-2197	mouse/mouse	MAb	Anti VLDL receptor (various species)
v-*fes*. *See* Feline sarcoma oncogene.				
v-*fms*. *See* Colony stimulating factor 1 receptor.				
Vimentin: **VIM, 7431**				
COLO 320DM	CCL-220	human	P+	
COLO 320HSR	CCL-220.1	human	P+	
DBTRG-05MG	CRL-2020	human	P+	
HCN-1A	CRL-10442†	human	P+	
HCN-2	CRL-10742†	human	P+	
HPAC	CRL-2119	human	P–	
MeT-5A	CRL-9444†	human	P+	
NCCIT	CRL-2073	human	P+	
NCI-H128	HTB-120	human	P–	
NCI-H146	HTB-173	human	P+	
NCI-H23	CRL-5800	human	P+	
NCI-H292	CRL-1848	human	P+	
NCI-H460	HTB-177	human	P+	
NCI-H520	HTB-182	human	P+	
NCI-H522	CRL-5810	human	P+	
NCI-H524	CRL-5831	human	P+	
NCI-H596	HTB-178	human	P+	
NCI-H661	HTB-183	human	P+	
NCI-H69	HTB-119	human	P–	
NCI-H82	HTB-175	human	P+	
NCI-N417	CRL-5809	human	P+	
VA-ES-BJ	CRL-2138	human	P+	
Vimentin: **Vim 22352**				
NE	CRL-2070	mouse	P+	
WR21	CRL-2189	mouse	P+	

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Vimentin: **Vim, 81818**				
EGC/PK060399egfr	CRL-2690	rat	P+	
NMU	CRL-1743	rat	P–	
RBA	CRL-1747	rat	P–	
RL-65	CRL-10354†	rat	P+	
RMC	CRL-2573	rat	P+	
Vitamin D (1,25- dihydroxyvitamin D3) receptor: **VDR , 7421**				
HT-29	HTB-38	human	R+	
Vitamin D receptor: **Vdr, 24873**				
UMR-106	CRL-1661	rat	R+	Responsive
UMR-108	CRL-1663	rat	R+	Responsive
Vitamin D receptor (species not yet curated)				
XVI E6E6G10	HB-9496†	mouse/mouse	MAb	Anti porcine receptor for 1,25-dihydroxy vitamin D3
Vitronectin receptor: **VTNR, 7449**				
293	CRL-1573	human	R+	
CMVα1 WSS-1	CRL-2029	human	R+	
B6H12.	HB-9771†	mouse/mouse	MAb	Anti human integrin associated protein (CD47) and vitronectin receptor (VnR)
VLA-1. *See* Integrin, alpha 1.				
VLA-4. *See* Integrin, alpha 4.				
v-*myb*. *See myb.*				
von Willebrand factor: **VWF, 7450**				
HK-2	CRL-2190	human	A–	
von Willebrand factor homolog: **Vwf, 22371**				
EOMA	CRL-2586	mouse	A+	
MS1 (MILE SVEN 1)	CRL-2279	mouse	A+	
SV40 MES 13	CRL-1927	mouse	A–	
SVEC4-10	CRL-2181	mouse	A+	
SVEC4-10EE2	CRL-2167	mouse	A+	
von Willebrand factor product				
bEnd.3	CRL-2299	mouse	P+	
v-*sis*. *See* Platelet-derived growth factor receptor, beta polypeptide.				
v-*src*. *See src.*				
Wingless-related MMTV integration site 3A: **Wnt3a, 22416**				
L Wnt-3A	CRL-2647	mouse	O+	Secretes biologically active Wnt-3A protien
Wingless-type MMTV integration site family member 2: **WNT2, 7472**				
AN3 CA	HTB-111	human	O–	
BT-20	HTB-19	human	O–	
HEC-1-A	HTB-112	human	O–	
MCF7	HTB-22	human	O–	
MDA-MB-157	HTB-24	human	O–	
MDA-MB-231	HTB-26	human	O–	
MDA-MB-361	HTB-27	human	O–	
MDA-MB-415	HTB-128	human	O–	
RL95-2	CRL-1671	human	O–	
T-47D	HTB-133	human	O–	
Wingless-type MMTV integration site family, member 3: **WNT3, 7473**				
AN3 CA	HTB-111	human	O–	
BT-20	HTB-19	human	O+	
HEC-1-A	HTB-112	human	O+	
MCF7	HTB-22	human	O+	
MDA-MB-157	HTB-24	human	O–	
MDA-MB-231	HTB-26	human	O–	
MDA-MB-361	HTB-27	human	O–	
MDA-MB-415	HTB-128	human	O–	
NTERA-2 cl.D1	CRL-1973	human	O+	
RL95-2	CRL-1671	human	O–	
T-47D	HTB-133	human	O–	

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Wingless-type MMTV integration site family, member 3A: **WNT3A, 89780**				
BT-20	HTB-19	human	O–	
MCF7	HTB-22	human	O+	
MDA-MB-157	HTB-24	human	O–	
MDA-MB-231	HTB-26	human	O–	
MDA-MB-361	HTB-27	human	O–	
MDA-MB-415	HTB-128	human	O–	
NTERA-2 cl.D1	CRL-1973	human	O+	
T-47D	HTB-133	human	O–	
Wingless-type MMTV integration site family, member 4: **WNT4, 54361**				
AN3 CA	HTB-111	human	O–	
BT-20	HTB-19	human	O–	
HEC-1-A	HTB-112	human	O–	
MCF7	HTB-22	human	O–	
MDA-MB-157	HTB-24	human	O–	
MDA-MB-231	HTB-26	human	O–	
MDA-MB-361	HTB-27	human	O–	
MDA-MB-415	HTB-128	human	O+	
RL95-2	CRL-1671	human	O+	
T-47D	HTB-133	human	O–	
Wingless-type MMTV integration site family, member 5A: **WNT5A, 7474**				
AN3 CA	HTB-111	human	O–	
HEC-1-A	HTB-112	human	O–	
RL95-2	CRL-1671	human	O+/–	
Wingless-type MMTV integration site family, member 7A: **WNT7A, 7476**				
AN3 CA	HTB-111	human	O–	
BT-20	HTB-19	human	O–	
HEC-1-A	HTB-112	human	O+	
MCF7	HTB-22	human	O–	
MDA-MB-157	HTB-24	human	O–	
MDA-MB-231	HTB-26	human	O–	
MDA-MB-361	HTB-27	human	O–	
MDA-MB-415	HTB-128	human	O–	
RL95-2	CRL-1671	human	O+	
T-47D	HTB-133	human	O–	
Wingless-type MMTV integration site family, member 7B: **WNT7B, 7477**				
AN3 CA	HTB-111	human	O–	
BT-20	HTB-19	human	O+	
HEC-1-A	HTB-112	human	O+	
MCF7	HTB-22	human	O+	
MDA-MB-157	HTB-24	human	O+	
MDA-MB-231	HTB-26	human	O+	
MDA-MB-361	HTB-27	human	O+	
MDA-MB-415	HTB-128	human	O+	
RL95-2	CRL-1671	human	O+	
T-47D	HTB-133	human	O+	
Wingless-type MMTV integration site family, member 10B: **WNT10B, 7480**				
AN3 CA	HTB-111	human	O+	
HEC-1-A	HTB-112	human	O–	
RL95-2	CRL-1671	human	O+	
v-*yes*-1 Yamaguchi sarcoma viral oncogene homolog 1: **YES1, 7525**				
240-13D10	CRL-2672	mouse/mouse	MAb	Anti c-*yes* synthetic oncogene peptide
Yamaguchi sarcoma viral (v-*yes*) oncogene homolog: **Yes, 22612**				
SYF	CRL-2459	mouse	O–	
zeta-chain (TCR) associated protein kinase 70kDa: **ZAP70, 7535**				
P116	CRL-2676	human	P–	
P116.cl39 [P116.c39]	CRL-2677	human	P+	
ZO-1 (tight junction protein). *See* Tight junction protein 1 (zona occludens 1).				
Zona pellucida glycoprotein 1: **Zp1, 22786**				
M1.4	CRL-2464	rat/mouse	MAb	Anti mouse ZP1 glycoprotein

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Genes and Bioactive Compounds

Name: Symbol, GeneID Cell Line Name	ATCC® No.	Species	Expresses	Comments
Zona pellucida glycoprotein 2 (sperm receptor): **ZP2, 7783**				
H2.8	CRL-2568	mouse/mouse	MAb	Anti human ZP2 glycoprotein
Zona pellucida glycoprotein 2: **Zp2, 22787**				
IE-3	CRL-2463	rat/mouse	MAb	Anti mouse ZP2 glycoprotein

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Notes

Notes

Section IV: Technical Information

Getting started with an ATCC cell line
Cell growth and propagation
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Culture vessels and surfaces
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Getting Started with an ATCC Cell Line

ATCC cell lines and hybridomas are shipped frozen on dry ice in cryopreservation vials or as growing cultures in flasks at ambient temperature. Upon receipt of frozen cells, it is important to immediately revive them by thawing and removing the DMSO and placing them into culture. If this is not possible, store the cells in liquid nitrogen vapor (below –130°C). Do not store frozen cells at temperatures above –130°C as their viability will decline rapidly.

Product Information Sheet

ATCC cell lines come with a Product Information Sheet that contains detailed information for handling the cells. An abbreviated version may be found at the ATCC website or call ATCC Technical Service Department to request a copy. The Product Information Sheet also contains batch-specific information such as the number of cells per vial, the recommended split or subcultivation ratio, and the passage number when known.

Preparation of medium

Prepare for reviving cell lines by assembling the appropriate medium, serum, and additional reagents required for growth. Many of these products are available from ATCC and can be ordered with the cell lines (see page 19 for a complete listing). These are the same reagents used by ATCC for cell growth and preservation.

NOTE: While most cell lines can replicate in more than one culture medium, their characteristics may alter when the medium is changed. For this reason, starting cell cultures in the same medium used by ATCC is recommended for the best results (see the Product Information Sheet and ATCC website). For details on adapting a cell line to a new medium, see page 262.

Initiating frozen cultures

1. Prepare a culture vessel so that it contains the recommended volume of the appropriate culture medium as listed on the Product Information Sheet, equilibrated for temperature and pH (CO_2).
2. Thaw the vial by gentle agitation in a water bath at 37°C or the normal growth temperature for that cell line. Thawing should be rapid, approximately 2 minutes or until ice crystals have melted.
3. Remove the vial from the water bath and decontaminate it by dipping in or spraying with 70% ethanol. Follow strict aseptic conditions in a laminar flow tissue culture hood for all further manipulations.
4. Unscrew the top of the vial and transfer the contents to a sterile centrifuge tube containing 9 ml of the recommended medium. Remove the cryoprotectant agent (DMSO) by gentle centrifugation (10 minutes at 125 × *g*). Discard the supernatant, and resuspend the cells in 1 or 2 ml of complete growth medium. Transfer the cell suspension into the culture vessel containing the complete growth medium and mix thoroughly by gentle rocking.
5. Examine the cultures after 24 hours. Subculture as needed.

NOTE: Some cell lines, such as hybridomas, take several days before fully recovering from cryopreservation. Some hybridomas have poor viability the first day in culture and will generate cellular debris. After this point, the cells will begin to recover and enter exponential growth.

Processing flask cultures

Some ATCC cell lines, primarily those from the NBL collection (page 12), are shipped as growing cultures in culture vessels. These vessels are seeded with cells, incubated to ensure cell growth and then filled completely with medium for shipping.

Upon receiving a flask culture, visually examine the medium for macroscopic evidence of microbial contamination. This includes unusual pH shifts (yellow or purple color from the phenol red), turbidity, or particles. With an inverted microscope at low power (100×) check the medium for evidence of microbial contamination as well as the morphology of the cells. See page 262 for more details on examining cell cultures.

If the cells are attached and growing in a monolayer:

1. Aseptically remove all but 5 to 10 ml of the shipping medium. The shipping medium can be saved for reuse and should be stored at 4°C.
2. Incubate the flask at the temperature and CO_2 concentration recommended on the Product Information Sheet (37°C with 5% CO_2 for most cell lines) until the cells are subcultured.

If the cells are not attached or are growing in suspension:

1. Aseptically transfer the entire contents of the flask to a centrifuge tube.
2. Centrifuge at 125 × *g* for 5 to 10 minutes.
3. Remove all but 10 ml of the shipping medium supernatant and resuspend the cells. Store the remainder of this medium at 4°C for later use.
4. Aseptically transfer the resuspended cells to a 25-cm^2 flask or 75-cm^2 flask, depending upon the cell line (see the Product Information Sheet).
5. Incubate the cells at the temperature and CO_2 concentration recommended on the Product Information Sheet until cells are subcultured.

Cell Growth and Propagation

Most cell lines begin as primary cultures originating from a piece of minced or enzyme-dispersed tissue. Primary cultures, as mixtures of several cell types, retain the characteristics of their source tissue.

After a period of time, primary cultures will reach confluency, the state when all available space of the culture vessel is covered due to cellular expansion. At this point, the culture will need to be disaggregated (usually with proteolytic enzymes like trypsin) into individual cells and subcultured (split, passaged, or transferred). Following this first passage, the culture is generally referred to as a cell line. With each subsequent subculture, the cellular population becomes more homogeneous as the faster growing cells predominate. Cells with desired properties can also be selected out of the culture by cloning.

Diploid cell lines rarely progress beyond a few population doublings. They have a finite replicative capacity and begin to slow down and eventually stop dividing after 20 to 80 population doublings.[1] Recent evidence suggests that some of the observed cellular senescence in cell culture may be due to inappropriate culture conditions as opposed to a predetermined replicative senescence.[2] Still other data support replicative senescence for the cells of some species (notably human) even when grown in improved culture conditions. This senescence is mediated by the shortening of the ends of the chromosomes (telomeres) with each cell division.[3]

In contrast, continuous (or immortalized) cell lines have infinite replicative capacity. These lines are derived from cell lines through immortalization or transformation by any one of a number of means. Many continuous cell lines were derived from tumor tissue. Most of the cell lines in the ATCC collection are continuous, though a few, such as CCD-1117Sk human skin fibroblast (ATCC® CRL-2465) or CCD-18Co human colon (ATCC® CRL-1459™) are finite. For more information about ATCC immortalized cell lines see the website.

As noted in the section on culture vessels, cell lines grow either attached to a surface (anchorage dependent) or in suspension (anchorage independent). As cells grow and divide in a monolayer or in suspension, they usually follow a characteristic growth pattern composed of four phases: Lag, log or exponential, stationary or plateau and decline.

- Lag phase — Immediately after seeding of the culture vessel, the cells grow slowly while recovering from the stress of subculturing.
- Log or exponential phase — The cells enter a period of exponential growth that lasts until the entire growth surface is occupied or the cell concentration exceeds the capacity of the medium.
- Stationary phase — Cell proliferation slows and stops.
- Decline phase — If the culture medium is not replaced and the cell number is not reduced, the cells lose viability and their number decreases.

To ensure viability, genetic stability, and phenotypic stability, cell lines need to be maintained in the exponential phase. This means that they need to be subcultured on a regular basis before they enter the stationary growth phase, before a monolayer becomes 100% confluent or before a suspension reaches its maximum recommended cell density. Generating a growth curve for each cell line is useful to determine the growth characteristics of the cell line (see Figure 1).

For detailed information on the growth and propagation of any ATCC cell line, see the specific cell line Product Information Sheet which is included with every shipment. An abbreviated version may also be found on the ATCC website, or call ATCC Technical Service to have one sent to you. The Product Information Sheet contains valuable information about growth medium, subculturing procedure, split ratio, and any requirements for feeding the culture between passages.

Passage number and population doubling level

Primary cultures are generally subcultured at a 1 to 2 ratio (they are split in half with each passage). Most continuous cell lines replicate at higher rates and are subcultured at a much higher split ratio. **Passage number** is generally the number of times the cells have been subcultured into a new vessel. For diploid cultures, passage number is roughly equal to the number of population doublings (or **population doubling level**, PDL) since the culture was started. This is not the case for continuous cell lines as they are passaged at higher split ratios. Consequently the PDL is not determined for continuous cell lines. In most cases, the PDL is an estimate as it does not account for any cells that were lost due to death from necrosis or apoptosis or cells which are nearing senescence and no longer divide.

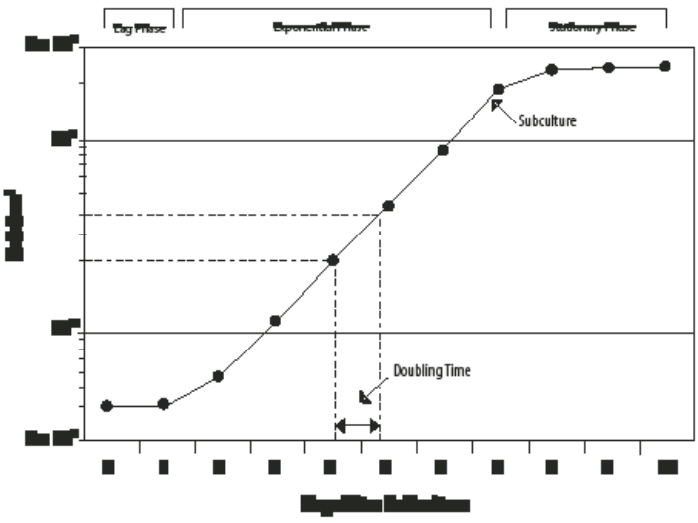


Figure 1. Growth curve for cells grown in culture. Cells should be subcultured while still in the exponential phase.

Cell Growth and Propagation

Calculate the population doubling level with the following formula:

PDL = 3.32 (log Xe – log Xb) + S

Xb is the cell number at the beginning of the incubation time.
Xe is the cell number at the end of the incubation time.
S is the starting PDL.

Calculate the population doubling time, or the time required for a culture to double in number, with the following formula:

DT=T ln2/ln(Xe/Xb)

T is the incubation time in any units.
Xb is the cell number at the beginning of the incubation time.
Xe is the cell number at the end of the incubation time.

NOTE: Cells grow at different rates in each of the different phases of the growth cycle and the calculated doubling time may be a composite of growth during more than one of these phases. Growth during exponential growth or log phase is fairly constant and reproducible for a given set of growth conditions.

ATCC tracks the PDL and passage number for many adherent cell lines when the depositor supplies this information at the time of deposit. See the Product Information Sheet for the specific cell line for the passage number and/or PDL as part of the batch-specific information supplied.

Adapting to a new medium or serum

To ensure that the characteristics of your cell line remain constant, maintain your cells in the same medium, serum, and supplements with the same subculturing regimen used to establish the culture. Any change to the culturing conditions has the potential to change the characteristics of the cell line.

Be particularly cautious when working with a new cell line as media formulations vary among suppliers, even for media with similar or identical names. Read descriptions, formulations, and labels carefully to ensure that the appropriate medium is used or the cell line may be inadvertently adapted to a new medium. All ATCC cell lines come with information on their growth medium. In most cases, the recommended medium and serum can be purchased from ATCC along with the cell line.

Use the following procedure to adapt a cell line to a new medium:

1. Subculture the line at a 1:2 split ratio (split the culture in half) into two vessels. **Maintain one with the original medium and continue to subculture these cells for the entire adaptation process.** Use a 1:1 mix of the original and new medium in the second vessel. The culture grown in the original medium serves as a reference point as well as a safeguard in case the adapting cells do not survive the process. The low split ratio helps mitigate the stress associated with subculturing as well as with the new medium.
2. Monitor cell growth in the two media and watch for any change in morphology or growth rate. If they are identical, subculture the adapting cells at the next passage with a 1:2 split ratio in a 1:3 medium mix (25% original, 75% new).
3. Monitor the growth rate and morphology of the original and adapting cultures. At the next passage, split the adapting cultures 1:2 in a 1:7 medium mix (12.5% original, 87.5% new).
4. Monitor the growth rate and morphology of the original and adapting cultures. If the cells are identical, then at the next passage split the adapting cells 1:2 in 100% new medium. At this point, the culture should be adapted to the new medium.

To confirm complete adaptation to the new medium, perform functional tests on cells derived from the original and new medium. If at any point in the process the adapting culture fails to perform as well as the reference culture, then allow the adapting culture more time and a few more passages in their current medium mix (e.g., 1:3, 1:7, etc.) until they match the reference cells.

The same approach can be used to adapt cells to serum-free medium; simply decrease the serum level in the medium by half with each passage until a 0.06% (or lower) serum level is reached. At this point, the cells can be maintained in serum-free medium. If at any point the growth rate declines, then the serum level should be increased to the level where the cells grew normally. In this procedure, start with the "serum-free" medium supplemented with serum so that only the level of serum changes with each passage.

Temperature

Most animal cell lines require 37°C for optimum growth. Insect and amphibian cells require lower temperatures (such as 28°C) as do some animal cell lines which are temperature sensitive for their phenotypic characteristics. While cultured cells can withstand considerable drops in temperature and most can survive for several days at 4°C, few can tolerate even a few hours at more than 2°C above their optimal temperature.

NOTE: Regularly calibrate the temperature control system of incubators and use an alarm system when possible to warn against temperature increases above the optimum setting.

Examination of cultures

Observe the morphology and viability of cultures regularly and carefully. Examine the medium in the vessel for macroscopic evidence of microbial contamination. This includes unusual pH shifts (yellow or purple color from the phenol red), turbidity, or particles. Also, look for small fungal colonies that float at the medium-air interface. Specifically check around the edges of the vessel as these may not be readily visible through the microscope.

With an inverted microscope at low power (40×), check the medium for evidence of microbial contamination and the morphology of the

Cell Growth and Propagation

cells. Bacterial contamination will appear as small, shimmering black dots within the spaces between the cells. Yeast contamination will appear as rounded or budding particles, while fungi will have thin filamentous mycelia. For nonadherent cells grown in flasks, such as hybridomas, this is a simple matter of viewing the flask directly on the microscope. For cells grown in spinner flasks or bioreactors, a sample of the cell suspension will need to be withdrawn and loaded into a microscope slide or hemocytometer for observation.

Most adherent cells should be attached firmly to the surface. In some cases, healthy cells will round up and detach somewhat during mitosis and appear very refractile. Following mitosis, they will reattach. Some of these will float free if the culture vessel is physically disturbed. In contrast, dead cells often round up and detach from the monolayer and appear smaller and darker (not refractile) than healthy cells.

Cells in suspension culture grow either as single cells or as clusters of cells. Viable cells appear round and refractile whereas dead cells appear smaller and darker. Occasionally, a portion of the cells will attach and grow on the side of the culture vessel and appear round or flattened. The percentage of attached cells varies with the culture conditions and the cell density. Cellular debris may also be observed in healthy cell populations. Some cell lines grow as mixed adherent and suspension cultures.

As a reference, photomicrographs for some ATCC cell lines are available on the website. Cells are shown at two different densities: just after subculturing (low) and just before they need to be subcultured (high).

In addition to daily examinations, periodically test a sample of the culture for the presence of fungi, bacteria, and mycoplasma. There are several methods that can be used to check for these contaminants. For additional information, refer to the section on microbial contamination (page 277).

Cell counting

Cell counts are necessary in order to establish or monitor growth rates as well as to set up new cultures with known cell numbers. Hemocytometers (also spelled *hemacytometers*) are commonly used to estimate cell number and determine cell viability. A hemocytometer is a fairly thick glass slide with two counting chambers, one on each side. Each counting chamber has a mirrored surface with a 3 × 3 mm grid of 9 counting squares (see Figure 2). The chambers have raised sides that will hold a coverslip exactly 0.1 mm above the chamber floor. Each of the 9 counting squares holds a volume of 0.0001 ml.

Hemocytometers are excellent for determining cell viability, but are not precise for determining cell number due to the relatively low number of cells actually counted. An automated counter will generate the most reliable data, particularly when used in combination with the viability data from a hemocytometer.

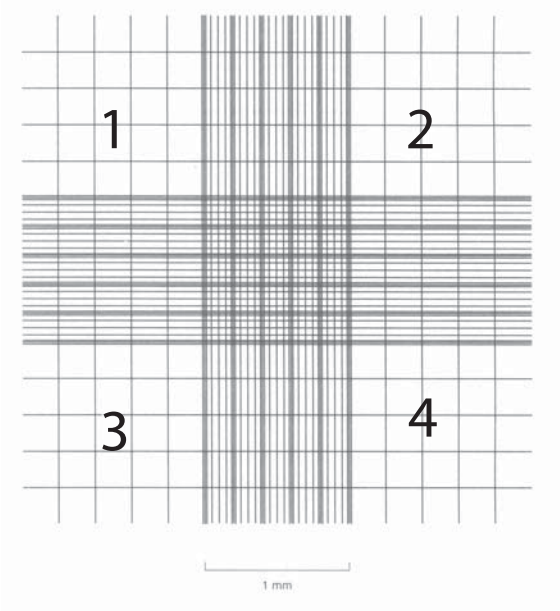


Figure 2. Hemocytometer grid with Neubauer ruling.

Count cells as follows:

1. Clean, thoroughly dry, and assemble the hemocytometer with the cover slip.
2. Transfer a small amount of cell suspension to the edge of each of the two counting chambers. Allow the cell suspension to be drawn into the counting chamber by capillary action.
3. Place the hemocytometer under an inverted microscope and view the cells at 100× magnification.
4. Focus on the squares on each of four corners, labeled 1, 2, 3, and 4 in Figure 2.
5. Record the number of cells in each square. Average the number of cells, and multiply by the dilution factor. If the cells have not been diluted, this factor will be 10^4 cells/ml. Any dilution of the sample after it was removed from the cell suspension, such as using vital stain, needs to be included in the calculation.

   For example, if the four counts are 60, 66, 69, and 75, the concentration would be 68×10^4 cells/ml for the sample that was loaded into the hemocytometer. For best results, adjust the concentration of the suspension so that 50 to 100 cells are in each of the five counting squares.

Most cultures will grow at an initial inoculum cell concentration ranging from 10^3 to 10^4 cells/cm^2. Faster-growing cultures are usually set up at lower concentrations. Some cultures do not grow well unless a minimum concentration of cells is initially added; see the product sheet for details.

Cell Growth and Propagation

Cell viability

Viability assays measure the number of viable cells in a population. When combined with the total number of cells, the number of viable cells provides an accurate indication of the health of the cell culture. The most common and rapid methods rely upon the integrity of the cell membrane as an indicator of cell viability. Both trypan blue (ATCC® No. 30-2502) and erythrosin B (ATCC® No. 30-2504) stains are actively excluded by viable cells but are taken up and retained by dead cells, which lack an intact membrane.

While both stains are used in the same way, ATCC recommends erythrosin B in place of trypan blue for hematopoetic cells. When using trypan blue, incubate cells for two to five minutes prior to use. If not counted within this time, the cells will begin to deteriorate and take up the dye. Erythrosin B does not require an incubation period.

Erythrosin B stain generates more accurate results with fewer false negatives and false positives. Erythrosin B stain solution provides a clear background and does not bind serum proteins as avidly as trypan blue, making stained cells more distinct and easier to identify. Also, microbial contamination or precipitates in the cell culture are more readily apparent. Finally, trypan blue is toxic and a potential carcinogen.

For either stain use the following directions:

1. Mix the cell suspension 1:1 with a 0.1% erythrosin B solution in PBS or 0.4% trypan blue solution in PBS.
2. Load the cells in the erythrosin B solution directly into a clean, dry hemocytometer, but incubate the trypan blue solution for two to five minutes before loading.
3. Nonviable cells will be stained red (erythrosin B) or dark blue (trypan blue). Cell viability is calculated as the number of unstained or viable cells divided by the total number of cells and expressed as a percentage.

Subculturing monolayer cells

Anchorage-dependent cell lines growing in monolayers need to be subcultured at regular intervals to maintain them in exponential growth. When the cells are near the end of exponential growth (roughly 70 to 90% confluent), they are ready to be subcultured. The subculturing procedure, including recommended split-ratios and medium replenishment (feeding) schedules, for each ATCC cell line is provided on the Product Information Sheet.

Subcultivation of monolayers involves the breakage of both intercellular and intracellular cell-to-surface bonds. For some cells that are loosely attached, a sharp blow with the palm of your hand against the side of the flask can dislodge them. Many require the digestion of their protein attachment bonds with proteolytic enzymes such as trypsin/EDTA. For some cell lines mechanical forces such as scraping to dislodge the cells is preferred. After the cells have been dissociated and dispersed into a single-cell suspension, they are diluted to the appropriate concentration and transferred into fresh culture vessels with the appropriate growth medium where they will reattach, grow and divide.

The procedure below is appropriate for most adherent cell lines. However, since every cell line is unique, incubation times and temperature, number of washes or the solution formulations may vary. In all cases, continually observe the cells with a microscope during the dissociation process to prevent damage by the dissociation solution. The amounts used in this procedure are for a 75-cm^2 flask. Adjust volumes as appropriate for different sized vessels.

Monolayer subculturing

1. Bring the trypsin-EDTA solution (ATCC® No.30-2101), balanced salt solution [Dulbecco's Phosphate Buffered Saline without calcium or magnesium, ATCC® No. 30-2200], and complete growth medium to the appropriate temperature for the cell line. In most cases, this is the temperature used to grow the cells (usually 37°C). For some sensitive cells, the trypsin-EDTA solution may need to be used at room temperature or 4°C.
2. Remove and discard the cell culture medium from the flask.
3. Rinse the cell monolayer with Dulbecco's PBS without calcium or magnesium and remove.
4. Add 2 to 3 ml of the trypsin-EDTA solution and incubate at the appropriate temperature. Check the progress of cell dissociation by microscopy. To avoid clumping, do not agitate the cells by hitting or shaking the flask while waiting for them to detach.
5. Once the cells appear to be detached (5 to 15 minutes for most cell lines; they will appear rounded and refractile under the microscope), add 6 to 8 ml of complete growth medium with a pipette to the cell suspension to inactivate the trypsin. Gently wash any remaining cells from the growth surface of the flask. Check the cells with the microscope to be sure that most (>95%) are single cells. If cell clusters are apparent, continue to disperse the cells with gentle pipetting.

   NOTE: For serum-free or low-serum medium, remove the trypsin-EDTA solution by gentle centrifugation (10 minutes at 125 × *g*) and then resuspend the cells in 6 to 8 ml of fresh medium. In some cases, the trypsin will need to be inactivated with a trypsin inhibitor.

6. Add 12 to 15 ml of fresh culture medium to a new flask and equilibrate this medium to the appropriate pH and temperature.
7. Count the cells in suspension and determine their viability or simply divide them according to a routine split ratio and dispense them into the medium of the newly prepared flask. Do not add a concentrated cell suspension to an empty culture vessel as this can result in uneven cell attachment and growth.
8. Place the flask back into the incubator. Examine the culture the following day to ensure the cells have reattached and are actively growing. Change the medium as needed; for most actively growing cultures two to three times per week is typical.

Cell Growth and Propagation

Toubleshooting monolayer cell subculturing

Cells are difficult to remove.

- Inhibitors in the medium (such as serum) have inactivated the dissociating agents. Rinse the cell monolayer twice with Dulbecco's PBS without calcium or magnesium before adding the dissociating solution. Or use the trypsin-EDTA solution in place of the Dulbecco's PBS for the first rinse of the monolayer.
- The dissociating solution was too weak. Use higher enzyme concentrations, higher EDTA concentrations, or different and/or additional enzymes (e.g., dispase, collagenase). Or incubate the cells at 37°C to increase the activity of the dissociating solution.
- The cells have been confluent for too long and the cell-to-cell junctions are so tight they prevented the dissociation agents from reaching the substrate-cell interface. In the future, subculture the cells before they become as confluent.

Cells form clumps after dissociation.

- The dissociation procedure was too harsh and genomic DNA was released from lysed cells. Either the pipetting was too vigorous or the dissociating solution was too strong or too toxic (i.e., the pH or osmolality of the buffer was incorrect). Add a drop of sterile DNAse (1 mg/ml in water) to the cell suspension to break down the DNA strands. In the future, treat the cells more gently during pipetting, shorten the incubation period, use a weaker dissociation solution (lower the enzyme concentration or remove the EDTA), or incubate at a lower temperature.
- The cells aggregated before dilution and dispersion into the medium. Hold the cell suspension on ice if there will be a delay between removing the cells from the flask growth surface and seeding a new flask.
- The cells were centrifuged too hard or too long when removing excess dissociation solution. Be sure to use gentle centrifugation (10 minutes at 125 × *g*).

Cells have difficulty reattaching to the flask.

- The dissociation procedure was too long and stripped away necessary attachment proteins from the cell membrane.
- Insufficient serum or attachment factors were present in the medium (common with serum-free medium). Add attachment factors to the medium and/or use a protein-coated flask (collagen, poly-L-lysine, fibronectin, gelatin, etc.).
- The dissociating solution was not inactivated or removed by centrifugation. Add additional serum or specific enzyme inhibitors (e.g., soybean trypsin inhibitor) to the neutralizing medium or centrifuge (5 minutes at 125 × *g*) the cells down from the dissociation solution and resuspend in fresh medium.

Viability is lower than expected.

- The dissociating procedure was too harsh.
- The pH or osmolality of the balanced salt solution containing the dissociation agents is incorrect. Check these directly and/or use a fresh bottle.
- The dispersed cell suspension was left too long at too high a cell concentration prior to reseeding. Keep the cells on ice.
- The medium was faulty. Use the recommended formulation and make sure it contains all of the required additives.

Suspension cells

Most primary cultures, finite cell lines, and continuous cell lines are anchorage dependent and thus grow in monolayers attached to a surface. Other cells, particularly those derived from hematopoietic or certain tumor tissues, are anchorage independent and grow in suspension.

Cell propagation in suspension has several advantages over propagation in monolayer. Subculturing is a simple matter of dilution. There is little or no growth lag after splitting a suspension culture as there is with a monolayer culture, because there is none of the trauma associated with proteolytic enzyme dispersal. Suspension cultures require less lab space per cell yield, and scale-up is straightforward. Cells can be propagated in bioreactors similar to the fermentors used for yeast or bacteria cultures.

Depending upon the cell type, suspension cultures are seeded at densities from 2×10^4 to 5×10^5 viable cells/ml and can attain densities of 2×10^6 cell/ml. If cells are seeded at too low a density they will go through a lag phase of growth, grow very slowly, or die out completely. If cell densities are allowed to become too high, the cells may exhaust the nutrients in the medium and die abruptly. Recommended seeding and subculturing densities, media replenishment (feeding) schedules, and medium formulations for each ATCC cell line are provided on the Product Information Sheet as well as in the catalogue description on the website.

Suspension cell subculturing

1. Bring the complete growth medium to the appropriate temperature (usually 37°C) in a water bath.
2. Thoroughly mix the cell/medium suspension; use a pipette to suspend cells grown in stationary flasks. Remove a small amount of the cell suspension to determine the cell density and viability using a hemocytometer and vital stain (page 263).
3. Calculate the volume of cells required to re-seed the flask at the minimum density for that cell line, taking into consideration the amount of fresh medium that will be used.
4. Add the appropriate volume of medium to the culture vessel and then add the cell suspension. Do not add the concentrated cell suspension to an empty flask. The same culture vessel can be reused, but the chances of contamination increase with each reseeding due to the buildup of small spills of medium on the flask opening.
5. If necessary, "gas" the atmosphere of the flask with sterile-filtered CO_2, seal the flask, and then incubate at the appropriate temperature.

Cell Growth and Propagation

It is generally not necessary to completely change the medium unless the cells attain a very high density or the medium has an acidic pH (yellow in color from the phenol red). To completely replace the medium, centrifuge the cells gently (10 minutes at 125 × *g*), decant the medium, and then resuspend the cells in fresh medium at the lower seeding density.

Troubleshooting suspension cell subculturing

Viability is lower than expected.

- The cell suspension was left too long at too high a cell concentration prior to subculture. In this case, the medium will have a low pH and be yellow in color. Completely change the medium by gently centrifuging the cells and resuspend in fresh medium at the lower seeding density.
- The cell suspension was diluted below the recommended cell density range. Recover the cells by centrifugation and resuspend in fresh medium at the appropriate cell density.
- The harvesting procedure was too harsh (pipetting too vigorous, cells were centrifuged too hard or too long, cells damaged during scraping or banging).
- The medium was faulty. Use the recommended formulation and make sure it contains all of the required additives.

Adapting a monolayer cell line to grow in suspension

Some cell lines such as L-929 (ATCC® CCL-1™), HeLa (ATCC® CCL-2™) and BHK-21 (ATCC® CCL-10™) can be adapted to grow in suspension. With time, a population of cells can be selected that does not self-aggregate or adhere to a growth surface as readily as the parental line. However, the newly selected line may have lost or acquired characteristics that are different from the original cell population. In most cases it will be necessary to maintain the culture in suspension with mechanical stirring. Keep in mind that most anchorage-dependent cells will grow in suspension only with the use of microcarrier beads.

The procedure below was developed for BHK-21 cells,[4] but can be used as a starting point for most cell lines.

1. Dissociate the cell monolayer using standard procedures. Centrifuge and resuspend the cell suspension in an appropriate spinner medium such as Joklik's modified Eagle's Minimum Essential Medium (EMEM). Spinner media have reduced levels of calcium and magnesium.
2. Count the cell suspension, and then seed two or more spinner flasks with 5×10^5 cells/ml. This density may need to be adjusted for your particular cell line. The sides of the culture flask may need to be siliconized to prevent the cells from sticking to the glass.
3. Observe the cultures daily. Remove samples and record the number of viable cells for each flask.
4. Every three days, collect the cells growing in suspension by centrifugation (10 minutes at 125 × *g*). Count, and re-seed a fresh flask with fresh medium at 2.5×10^5 cells/ml. Depending on how well (or not) the cells adapt to growth in suspension, they may need to be combined with cells from different flasks to achieve the necessary cell density.
5. If there is a significant amount of cells attached to the walls of the culture vessel, particularly at the surface of the medium, remove them with trypsin-EDTA and discard them. If the cells in suspension are badly clumped, they can be dispersed with the trypsin-EDTA solution, collected by centrifugation, and then re-seeded into the flask as the appropriate density. This treatment may be necessary for the first few subcultures.
6. Continue to monitor the cells and subculture them every three days. Over time, they should adapt to growth in suspension and attain a constant growth rate.

Complete Growth Media

A complete growth medium consists of a basal cell culture medium supplemented with ingredients such as sera, growth factors, trace elements, and hormones. There are numerous formulations ranging from simple, basic mixtures containing the minimum requirements for growing many cell lines to complex serum-free mixtures specific for growing a single fastidious cell line. The choice of a medium for a particular cell line is somewhat empirical.

Many medium formulations are available commercially in powder or liquid form.

NOTE: Formulations can vary widely among suppliers, even for media with similar or identical names. Be sure to read catalogue descriptions, formulations, and medium labels carefully to ensure that the appropriate medium is used. **For best results start cell cultures in the same medium used and distributed by ATCC (listed on the Product Information Sheet).**

ATCC lists complete medium formulations, plus all handling and passage information, for all ATCC cell lines both in the online catalogue description and on the Product Information Sheet that accompanies the cell line when shipped. Additionally, ATCC offers a full line of media, sera, and reagents for culturing cells. These are the same reagents used at ATCC for cell growth and propagation. See pages 17-26 for descriptions of ATCC cell culture products.

Cell culture media

Cell culture media are complex mixtures of salts, carbohydrates, vitamins, amino acids, metabolic precursors, growth factors, hormones, and trace elements. The requirements for these components vary among cell lines, and these differences are partly responsible for the extensive number of medium formulations. Carbohydrates are supplied primarily in the form of glucose. In some instances, glucose is replaced with galactose to decrease lactic acid build-up, as galactose is metabolized at a slower rate. Other carbon sources include amino acids (particularly L-glutamine) and pyruvate.

In addition to nutrients, the medium helps maintain the pH and osmolality in a culture system. The pH is maintained by one or more buffering systems; CO_2/sodium bicarbonate, phosphate, and HEPES are the most common. Sera will also buffer a complete medium. Phenol red, a pH indicator, is added to medium to colorimetrically monitor changes in pH.

Commonly used culture media include the following:

Eagle's Minimum Essential Medium (EMEM) was among the first widely used media and was formulated by Harry Eagle from his earlier and simpler basal medium (BME). BME was developed for culturing mouse L cells (ATCC® CCL-1™) and HeLa cells (ATCC® CCL-2™). Over time, there have been numerous variations on the EMEM formula for different applications.

ATCC EMEM (ATCC® No. 30-2003) contains Earle's balanced salt solution, nonessential amino acids, and sodium pyruvate. It is formulated with a reduced sodium bicarbonate concentration (1,500 mg/l) for use with 5% CO_2 (see Sodium Bicarbonate and Buffering, page 268). Because EMEM is a simple medium, it is often fortified with additional supplements or higher levels of serum.

Dulbecco's Modified Eagle's Medium (DMEM) has roughly twice the concentration of amino acids and four times the amount of vitamins as EMEM, as well as ferric nitrate, sodium pyruvate, and some supplementary amino acids (though not all nonessential amino acids). The original formulation contained 1,000 mg/l of glucose, but in the more commonly used variations this amount was increased to 4,500 mg/l.

ATCC DMEM (ATCC® No. 30-2002) has 4,500 mg/l of glucose and a reduced sodium bicarbonate concentration (1,500 mg/l) for use with 5% CO_2.

Iscove's Modified Dulbecco's Medium (IMDM) was formulated for growth of lymphocytes and hybridomas. Compared to DMEM, it has additional amino acids, vitamins and inorganic salts. Potassium nitrate was substituted for ferric nitrate. It also contains HEPES and selenium.

ATCC IMDM (ATCC® No. 30-2005) has a reduced sodium bicarbonate concentration (1,500 mg/l) for use with 5% CO_2.

Hybri-Care Medium (ATCC® No. 46-X) is a combination and modification of DMEM and NCTC 135 medium supplemented with insulin, oxalacetic acid, and HEPES. It is based on the formulation used by David H. Sachs and collaborators[5] for the propagation of hybridomas and other fastidious cell lines.

McCoy's 5A and **RPMI-1640** were developed at Roswell Park Memorial Institute (RPMI) in Buffalo, New York. McCoy's 5A (ATCC® No. 30-2007) was originally used to grow Novikoff hepatoma cells and will support the growth of primary cultures.

RPMI-1640 is a modification of McCoy's 5A and was developed for the long-term culture of peripheral blood lymphocytes. RPMI-1640 will support the growth of a wide variety of cells in suspension as well as a number of cells grown as monolayers.

ATCC RPMI-1640 (ATCC® No. 30-2001) was modified to contain higher amounts of glucose (4,500 mg/l), sodium pyruvate, and HEPES buffer. It also contains a reduced concentration of sodium bicarbonate (1,500 mg/l) for use with 5% CO_2.

Ham's Nutrient Mixtures were originally developed to support the clonal outgrowth of Chinese hamster ovary (CHO) cells (ATCC® CCL-61™). As with EMEM, there have been numerous modifications to the original formulation including Ham's F-12 medium, a more complex formulation than the original F-10 suitable for serum-free propagation.
Kaighn's modification of Ham's F-12 (Ham's F-12K) was designed to support the growth and differentiation of primary cells with or without serum. F-12K has increased amounts of amino acids, pyruvate, biotin, calcium, magnesium, putrescine, and phenol red in addition to other modifications from the F-12 formula.

Complete Growth Media

ATCC Ham's F-12K (ATCC® No. 30-2004) has a reduced sodium bicarbonate concentration (1,500 mg/l) for use with 5% CO_2.

DMEM/F12 Medium is a 1:1 mixture of Dulbecco's modified EMEM and Ham's F-12. It is an extremely rich and complex medium and will support the growth of a broad range of cell types in both serum and serum-free formulations.

ATCC DMEM/F12 medium (ATCC® No. 30-2006) has a reduced sodium bicarbonate concentration (1,500 mg/l) for use with 5% CO_2.

Leibovitz's L-15 Medium (ATCC® No.30-2008) is formulated for use without CO_2 incubation as is found in teaching laboratories or when collecting biopsy samples. The standard sodium bicarbonate/CO_2 buffering system is replaced by a combination of phosphate buffers, free-base amino acids, higher levels of sodium pyruvate, and galactose. Cell cultures can be grown in CO_2 incubators with L-15 medium provided there is no exchange between the air in the culture vessel with that of the incubator (i.e., caps of flasks are tightly closed).

Media formulations

Formulations of media available from ATCC can be found online. There are cell lines in the collection that require media not currently sold by ATCC. Some of these media formulations have been provided on page 282.

Media ingredients

Sodium bicarbonate and buffering

Cells produce and require small amounts of carbon dioxide for growth and survival.[6] In culture media, dissolved CO_2 is in equilibrium with bicarbonate ions and many medium formulations take advantage of this CO_2/bicarbonate reaction to buffer the pH of the medium. CO_2 dissolves freely into the medium and reacts with water to form carbonic acid. As the cells metabolize and produce more CO_2, the pH of the medium decreases as the chemical reaction below is driven to the right:

$$H_2O + CO_2 \leftrightarrow H_2CO_3 \leftrightarrow H^+ + HCO_3^-$$

The optimal pH range of 7.2 to 7.4 can be maintained by supplementing the medium with sodium bicarbonate and regulating the level of CO_2 in the atmosphere above the medium as shown by the reaction below:

$$H_2O + CO_2 + NaHCO_3 \leftrightarrow H^+ + Na^+ + 2HCO_3^-$$

In tissue culture, cells are grown either in open systems (where there is free exchange of the atmosphere immediately above the medium with the atmosphere of the incubator) or in closed systems (where the two atmospheres are kept separate). The buffering system employed in the medium needs to be matched to the culture system. Otherwise the cells may be subject to metabolic stress which will impair their performance.

In closed systems the level of CO_2 is regulated by the metabolism of the cells. The culture vessel must be sealed (flasks tightly capped) to retain any CO_2 generated by the cells. Consequently, closed systems provide additional protection against contamination and have simpler incubator requirements than open systems. Closed systems usually require media with buffers based on Hanks' balanced salt solution having relatively low levels of sodium bicarbonate.

In open systems, humidity (to reduce evaporation) and a means of regulating CO_2 levels (if the culture medium contains sodium bicarbonate) are required during incubation to maintain the pH of the culture medium. Open systems usually require the higher levels of sodium bicarbonate found in Earle's salt solution combined with a 5 to 10% CO_2 atmosphere supplied by the incubator. In general, 1.2 to 2.2 g/l of sodium bicarbonate is used with 5% CO_2 whereas 3.7 g/l sodium bicarbonate is used with 10% CO_2. The exact amount will depend upon the medium formulation.

In some cases, researchers "gas" the atmosphere of the culture vessel with a stream of sterile-filtered 5% CO_2/95% air mixture and then tightly seal the flask prior to incubation in a nonhumidified and non-CO_2 incubator.[7] While these culture vessels work with simpler nonhumidified, non-CO_2 incubators, the medium requirements are those of an open system.

All ATCC media, with the exception of Leibovitz's L-15 (ATCC® No. 30-2008), are designed to be used with 5% CO_2 levels. Most have a sodium bicarbonate concentration of 1.5 g/l and are supplemented with extra sodium pyruvate. ATCC modification of McCoy's 5A (ATCC® No. 30-2007) has a slightly higher levels of sodium bicarbonate (2.2 g/l) and does not contain sodium pyruvate.

While most commercial formulations of liquid media do contain the appropriate amount of sodium bicarbonate, it is generally omitted from the powdered form and needs to be added before use.

Some medium formulations incorporate other buffering systems such as phosphate or HEPES in addition to CO_2/sodium bicarbonate. These media have the advantage of maintaining optimal pH in an open system when the culture vessel is removed from the enriched CO_2 atmosphere of the incubator.

HEPES buffer

HEPES and other organic buffers can be used with many cell lines to effectively buffer the pH of the medium.[8] Indeed, some standard medium formulations include HEPES. However, this compound can be toxic, especially for some differentiated cell types, so evaluate its effects before use.[9] HEPES has been shown to greatly increase the sensitivity of media to the phototoxic effects induced by exposure to fluorescent light.[10,11]

Phenol red

Phenol red is used to monitor the pH of media. During cell growth, the

Complete Growth Media

medium changes color as it changes pH due to metabolites released by the cells. At low pH levels, phenol red turns the medium yellow, while at higher pH levels it turns the medium purple. For most tissue culture work (pH 7.4), the medium should be bright red.

Unfortunately, phenol red can mimic the action of some steroid hormones, particularly estrogen. For studies with estrogen-sensitive cells, such as mammary tissue, use media without phenol red. Additionally, the sodium-potassium ion homeostasis is upset when phenol red is included in some serum-free formulations; this effect is neutralized by the inclusion of serum or bovine pituitary hormone in the medium.[12] Phenol red is frequently omitted from studies with flow cytometry as its color interferes with detection.

L-Glutamine

L-Glutamine (ATCC® No. 30-2214) is an essential amino acid required by virtually all mammalian and insect cells grown in culture. It is used for protein production, as an energy source, and in nucleic acid metabolism. It is also more labile in liquid cell culture media than other amino acids. The rate and extent of L-glutamine degradation are related to storage temperatures, age of the product, and pH.

Because L-glutamine is so labile, it is often omitted from commercial liquid medium preparations to lengthen the product shelf life. In these cases, it must be aseptically added prior to use. L-Glutamine is not as labile in dry form and most powdered medium formulations do include it.

In some cases, the addition of L-glutamine to complete cell culture medium can extend the usable life of the medium. If L-glutamine is suspected to be a limiting factor during cell culture, a simple test of 'spiking' the medium with a small amount of L-glutamine will determine whether or not more is required. Simply add a small amount of L-glutamine (~2 mM final concentration) to the culture medium. If the cell growth rate increases, L-glutamine is most likely deficient and more should be added. Alternately, the concentration of L-glutamine can be measured directly by standard analytical means such as HPLC (High Performance Liquid Chromatography).

L-Glutamine concentrations for mammalian cell culture media can vary from 0.68 mM in Medium 199 to 4 mM in Dulbecco's Modified Eagle's Medium. Invertebrate cell culture media, such as Schneider's Drosophila medium, may contain as much as 12.3 mM L-glutamine.

Use caution when adding more L-glutamine than is called for in the original medium formulation. L-Glutamine degradation results in the build-up of ammonia which can have a deleterious effect on some cell lines. For most cell lines, ammonia toxicity is more critical for cell viability than L-glutamine limitation.

Nonessential amino acids

All medium formulations contain the ten essential amino acids as well as cysteine, glutamine, and tyrosine. The inclusion of the other non-essential amino acids (alanine, asparagine, aspartic acid, glycine, glutamic acid, proline, and serine) in some medium formulations reduces the metabolic burden on the cells allowing for an increase in cellular proliferation.

Sodium pyruvate

Pyruvate is an intermediary organic acid metabolite in glycolysis and the first component of the Embden-Meyerhof pathway. It can pass readily into or out of the cell. Its addition to tissue culture medium provides both an energy source and a carbon skeleton for anabolic processes. Pyruvate may help in maintaining certain specialized cells, in clonal selection, in reducing the serum concentration of the medium,[7] and in reducing fluorescent light-induced phototoxicity.[10] Cellular metabolism of pyruvate produces carbon dioxide which is given off into the atmosphere and becomes bicarbonate in the medium. Sodium pyruvate is added to give a final concentration of 1 mM in most media, but is increased to 5 mM in Leibovitz's L-15 medium primarily to facilitate use in CO_2-free environments.

Media supplements

The complete growth media recommended for some cell lines requires the addition of components not already available in the base media and serum. These components include hormones, growth factors and signaling substances that sustain proliferation and maintain normal cell metabolism.

Supplements are usually prepared as 100× (or higher) stock solutions in serum-free medium. Some supplements may need to be dissolved in a solvent prior to subsequent dilution in serum-free medium to the stock concentration. Stock concentrations should be aliquoted into small volumes and stored at an appropriate temperature; most stock concentrations can be stored at –80ºC, but check with your supplier prior to storing.

The addition of supplements can change the final osmolality of the complete growth medium, which may have a negative effect on the growth of cells in culture. It is best to recheck the osmolality of the complete growth medium after small volumes of supplement stock solutions are added; optimal osmolality for most vertebrate cell lines should fall between 260 and 320 mOSM/kg.

After supplements have been added to a base medium, the shelf life of the complete growth medium should be determined on a case-by-case basis. Complete media containing protein supplements (e.g., epidermal growth factor, bovine serum albumin, etc.) tend to degrade faster than base media alone. Most complete growth media can be stored in aliquots at 2 to 8ºC for about a month. However, if any supplement is expected to expire before the one-month period has passed, the expiration date for the complete growth media should follow suit. Some fastidious cell lines may require that components be added immediately before use. Do not freeze complete growth medium. Freezing cell culture media at –70ºC or below causes some of the

growth factors and/or vitamins to precipitate out of solution. It can be very difficult to get these components to go back into solution after thawing, even if warmed to 37ºC. ATCC recommends storing media between 2 and 8ºC, away from light.

For additional information regarding the preparation, storage, or usage of specific supplements, contact your local supplier or consult with the manufacturer's Product Information Sheet.

Osmolality

The osmolality of cell culture media for most vertebrate cells is kept within a narrow range from 260 to 320 mOsm/kg, even though most established cell lines will tolerate a rather large variation in osmotic pressure. In contrast, the osmolality requirements for some invertebrate cell lines fall outside of this range. For example, the snail embryo (ATCC® CRL-1494™) requires medium of about 155 mOsm/kg, while some insect cells prefer 360 to 375 mOsm/kg. Most commercially available liquid media report osmolality and it is advisable to check the osmolality of any medium after the addition of saline solutions, drugs or hormones dissolved in an acid or base solution, or large volumes of buffers (e.g., HEPES).

Antibiotics and antimycotics

Antibiotics and/or antimycotic agents are added to cell culture media as a prophylactic to prevent contamination, as a cure once contamination is found, to induce the expression of recombinant proteins, or to maintain selective pressure on transfected cells.

Routine use of antibiotics or antimycotics for cell culture is not recommended unless they are specifically required, such as G418 for maintaining selective pressure on transfected cells. Antibiotics can mask contamination by mycoplasma and resistant bacteria. Further, they can interfere with the metabolism of sensitive cells. Avoid antimycotics as they can be toxic to many cell lines.

While cell lines can be cured of microbial contamination with antibiotics and/or antimycotics, this is not recommend unless the cell line is irreplaceable; the process is lengthy and there is no guarantee contamination will be eliminated. Even if the contamination is eliminated, there is no way of ensuring that the resulting cell line will have the same characteristics as the initial one due to the stress of the treatment. It is best to discard the cell line and start over with new stocks. Mycoplasma contamination in particular is very difficult to eliminate (see p. 277).
In some cases, antibiotic use for short periods of time can serve as a valuable prophylactic. For example, antibiotic use is recommended when developing and working with primary culture and when using flow cytometry to isolate subpopulations.

If an antibiotic is used in medium, penicillin-streptomycin solution (ATCC® No. 30-2300) can be added at 0.5 to 1 ml of solution per 100 ml of cell culture medium for a final concentration of 50 to 100 IU/ml penicillin and 50 to 100 µg/ml streptomycin. Gentamicin sulfate, another antibiotic (ATCC® No. 30-2303), is used at 50 to 100 µg/ml. The antimycotic amphotericin B (ATCC® No. 30-2301) is used at 2.5 µg/ml.[13] These concentrations apply to media that contain serum. For serum-free media, reduce the concentrations by at least 50%.

Animal sera

Sera serve as a source for amino acids, proteins, vitamins (particularly fat-soluble vitamins such as A, D, E, and K), carbohydrates, lipids, hormones, growth factors, minerals, and trace elements. Additionally, serum buffers the culture medium, inactivates proteolytic enzymes, increases medium viscosity (which reduces shear stress during pipetting or stirring), and conditions the growth surface of the culture vessel. The exact composition is unknown and varies from lot to lot, although lot-to-lot consistency has improved in recent years.

Sera from fetal and calf bovine sources are commonly used to support the growth of cells in culture. Fetal serum is a rich source of growth factors and is appropriate for cell cloning and for the growth of fastidious cells. Calf serum, because of its lower growth-promoting properties, is used in contact-inhibition studies with NIH/3T3 cells (ATCC® CRL-1658™). In contrast to fetal or calf sera, horse serum is collected from a closed herd of adult animals ensuring lot-to-lot consistency. Horse serum is less likely to carry the contaminants found in bovine sera such as viruses and less likely to metabolize polyamines which may be mitogenic for some cells. Horse and bovine calf sera are less expensive and more readily available than fetal bovine serum. The pricing and availability of fetal serum fluctuates considerably.

Unfortunately, naturally derived products from bovine sources may contain adventitious viruses such as bovine viral diarrhea virus (BVDV), bovine parvovirus, bovine adenovirus, and blue tongue virus. All reputable suppliers test their products for infectious virus by several methods including fluorescent antibody, cytopathic effect, and hemadsorption. These products are also screened for the standard microbial contaminants such as bacteria, fungi, and mycoplasma.

BVDV, in contrast to the other virus contaminants, is present in nearly all bovine serum at very low levels even when tests for infectious virus are negative. Fortunately, very few cell lines (except those of bovine origin) are susceptible to this virus. For the few sensitive cell lines, use non-bovine sera or irradiated bovine sera. Several ATCC cell lines were tested for BVDV contamination[14] and the results of this study are indicated in the cell line description on the website.
Bovine-derived products also may contain the agent responsible for bovine spongiform encephalopathy (BSE). Unfortunately, there is no test for the presence of this agent and we highly recommend that you obtain all bovine products (including sera) from countries not affected by BSE such as the United States, Australia and New Zealand.

At one time animal serum was a major source of mycoplasma con-

Complete Growth Media

tamination of tissue culture cells. However, nearly all sera today are filtered through several 0.1-µm pore (or smaller) filters which effectively remove this organism.

ATCC offers the following four types of animal sera:

- Fetal Bovine Serum (also known as fetal calf) — ATCC® No. 30-2020
- Fetal Bovine Serum qualified for embryonic stem cells — ATCC® No. SCRR-30-2020
- Iron-supplemented Calf Bovine Serum — ATCC® No. 30-2030
- Horse Serum — ATCC® No. 30-2040

These products are rigorously tested for adventitious infective agents and sourced from only U.S. herds. Further, each lot is tested for its ability to support cell growth and is the same sera used in ATCC labs.

Storage

Store sera at −20°C or colder for storage over 30 days. ATCC sera are routinely stored at −70°C. Do not store sera at temperatures above −20°C for any length of time. Avoid repeated freeze-thaws by dispensing and storing in aliquots.

Thawing

The following procedure is used to thaw serum:

1. Place frozen serum in a refrigerator at 2 to 8°C overnight.
2. Put the bottles in a 37°C water bath and gently agitate from time to time to mix the solutes that tend to concentrate at the bottom of the bottle.

Do not keep the serum at 37°C any longer than necessary to thaw it, and do not thaw the serum at higher temperatures. Thawing serum in a bath above 40°C without mixing may lead to the formation of a precipitate inside the bottle.

Turbidity and precipitates

All sera may retain some fibrinogen. Because external factors may initiate the conversion of fibrinogen to fibrin, flocculent material or turbidity may be observed after serum is thawed. The presence of this material does not alter the serum's performance. If the presence of flocculent material or turbidity is a concern, it can be removed by filtration through a 0.45-µm filter.
A precipitate can form in serum when incubated at 37°C or higher for prolonged periods of time which may be mistaken for microbial contamination. This precipitate may include crystals of calcium phosphate, but does not alter the performance of the serum as a supplement for cell culture. Heat inactivation of sera can also cause the formation of precipitates.

Heat inactivation

ATCC does not routinely use heat-inactivated serum unless specifically required for a particular cell line. Heat inactivation is usually unnecessary and can be detrimental to the growth of some cells. It will reduce or destroy growth factors present in the serum.

Heat inactivation was originally performed to inactivate complement (a group of proteins present in sera that are part of the immune response) as well as to destroy mycoplasma contaminants. Today, mycoplasma contamination, if any, is removed by filtration. Removal of complement is usually unnecessary, but can be important when preparing or assaying viruses or in cytotoxicity tests. According to a study by HyClone,[15] warming serum to 37°C inactivates heat-labile complement factors. A few types of cell lines grow better in heat-inactivated sera such as embryonic stem cells[16] and many insect cell lines.[17]

The following procedure can be used to heat-inactivate serum:

1. Thaw serum.
2. Preheat a water bath to 56°C. Use sufficient water to immerse the bottle above the level of serum.
3. Mix thawed serum by gentle inversion and place in the 56°C bath. The temperature of the water bath will drop.
4. When the temperature of the water bath reaches 56°C again, continue to heat for an additional 30 minutes. Mix gently every 5 minutes to insure uniform heating.
5. Remove serum from water bath, cool quickly (slow cooling can sometimes reverse the inactivation of complement activity), and store at −20°C or colder.

Culture Vessels and Surfaces

Vessels

Culture vessels provide a contamination barrier to protect the cultures from the external environment while maintaining the proper internal environment. For anchorage-dependent cells, the vessels provide a suitable and consistent substrate for cell attachment. Other characteristics of vessels include easy access to the cultures and optically clear viewing surfaces.[18]

Originally all culture vessels were glass. Drawbacks for glass include the heavy weight, expense, labor-intensive cleaning, and poor microscopic viewing compared to plastic. By the 1960s, surface treatment techniques were developed for polystyrene, allowing plastic vessels to replace glass for most cell culture applications.

The information below focuses on standard culture vessels used by many researchers. Large-scale culture equipment is not included.

Selecting the right vessel

First, match the characteristics of the cells to be grown with the characteristics of the different culturing systems. There are three basic types of cell cultures:

- Anchorage dependent, which must become attached to a surface to grow (for example, human diploid fibroblasts).
- Anchorage independent, which grow in suspension (most blood-derived cell cultures).
- Cells that can grow either attached or in suspension (many transformed cell lines such as HeLa and BHK-21).

Understand the growth requirements of the cultures to help select the best culture system. There are four basic culture systems:

- Stationary monolayer cultures which are grown in undisturbed flasks, dishes, and multiwell plates. These are the easiest culture systems to use and require the least amount of equipment. However, these systems are very labor intensive for producing large quantities of cells.
- Moving monolayer cultures which are grown primarily in roller bottles. These vessels are slowly rotated (approximately 0.5 to 1 rpm) on motorized racks or drums and are widely used for producing large quantities of cells. Roller bottles employ simple technology but require an investment in the appropriate equipment.
- Stationary suspension cultures which are grown without agitation in untreated dishes and flasks. These are best for growing small volumes of anchorage-independent cells that grow poorly in traditional stirred suspension cultures.
- Moving suspension cultures which are grown in mechanically stirred vessels (spinner flasks), bioreactors, or fermentors. These systems are the most economical in terms of space, labor and media; as a result, stirred suspension cultures are usually the method of choice for producing large volumes of cells both in the lab and in industry. Many anchorage-dependent cells can be adapted to grow on microcarriers to take advantage of these systems.

Next, decide whether the cells will be grown as an open system or as a closed system (see the section on sodium bicarbonate, page 268). Open-system plastic dishes are less expensive than closed-system flasks, but require more expensive incubators that can regulate the CO_2 and humidity in the atmosphere. Closed systems provide additional protection against contamination and have simpler incubator requirements.

All dishes and multiwell plates are open systems. All other culture vessels can be used in either mode by leaving caps loose for an open system or tightened for a closed system. The plastic walls of culture vessels are slightly permeable to carbon dioxide and oxygen, permitting a very small amount of gas exchange. This is not a problem in most culture applications, but may interfere with anoxia experiments or long-term storage of media.[19] Caps that allow gas exchange when the cap is fully tightened are available to reduce opportunities for flask spills and contamination in open systems.

The last step is matching the desired cell yield with an appropriately sized culture vessel. For monolayer cultures, the yield is limited by the area of treated growth surface. Approximately 0.5×10^5 to 1×10^5 cells/cm^2 of treated surface is a typical yield for confluent continuous mammalian cell lines. For suspension cultures the total cell yield is determined by the working volume of the vessel. In stirred systems, cell concentrations can easily reach between 1×10^6 and 2×10^6 cells/ml of medium. However, the exact yields will need to be determined empirically for each cell line. ATCC strongly recommends that cells be maintained in the logarithmic phase of growth, and not be allowed to enter the stationary phase. Anchorage-dependent cell lines are routinely passaged or split before they reach confluency.

Flasks

Alexis Carrel developed the first glass flasks in the 1920s. Harry Earle developed the more traditional straight neck rectangular (also hexagonal) glass T-flasks in the 1940s. Today, plastic flasks are available with a range of growing areas, a variety of shapes, with several different neck designs. Choice of design depends on the cell culture techniques used as well as personal preference. The more common sizes are listed below.

Description	Growth area (cm^2)	Recommended working volume (ml)	Cell yield*
T-25	25	5 to 10	2.5×10^6
T-75	75	15 to 25	7.5×10^6
T-150	150	30 to 50	15.0×10^6
T-175	175	35 to 60	17.5×10^6
T-225	225	45 to 75	22.5×10^6

*Cell line dependent. Based upon a density of 1×10^5 cells/cm^2.

Culture Vessels and Surfaces

Cell culture dishes

Cell culture dishes offer the best economy and access to the growth surface. This makes them the vessels of choice for cloning or other manipulations such as scraping that require direct access to the cell monolayer. They must be used with incubators that control CO_2 and humidity. Most manufacturers offer dishes in four diameters: 35 mm, 60 mm, 100 mm, and 150 mm. These are nominal diameters and may not be the actual diameter of the growth surface. Cell culture dishes are available with either specially treated surfaces for growing anchorage-dependent cells, or untreated (native) surfaces for growing suspension cultures where attachment is not desired.

Diameter (mm)	Growth area (cm^2)	Working volume (ml)	Cell yield*
35	8	1 to 2	0.8×10^6
60	21	4 to 5	2.1×10^6
100	55	10 to 12	5.5×10^6
150	148	28 to 32	14.8×10^6

*Cell line dependent. Based upon a density of 1×10^5 cells/cm^2.

Multiwell plates

These widely used vessels were originally designed for virus titration, but have since become popular in many other applications, especially hybridoma production, high-throughput screening, and toxicity testing. Multiwell plates offer significant savings in space, media, and reagents when compared to an equal number of dishes. They are more convenient to handle, especially if the pipettors, plate washers, readers, and other equipment for processing these plates are used. They must be used with incubators that control humidity and CO_2 levels.

Description	Growth area/ well (cm^2)	Working volume/ well (ml)	Cell yield*
96-well	0.32	0.1 to 0.2	0.32×10^5
48-well	1.0	0.3 to 0.6	0.8×10^5
24-well	1.88	0.5 to 1.2	1.9×10^5
12-well	3.83	1.0 to 2.4	3.8×10^5
6-well	9.40	2.0 to 3.0	9.5×10^5

*Cell line dependent. Based upon a density of 1×10^5 cells/cm^2.

Roller bottles

The roller bottle was developed for cultivating large numbers of anchorage-dependent cells.[20] Today they provide a more economical means for cultivating large volumes of cells using essentially the same culture techniques as with flasks but with considerably less labor. Besides the traditional smooth wall design, roller bottles are available with small ridges that approximately double the surface area available for growing cells without increasing the dimensions of the bottles.

Description	Growth area (cm^2)	Working volume (ml)	Cell yield*
Small	490	100 to 150	4.9×10^7
Standard	850	170 to 250	8.5×10^7
Pharmaceutical	1750	340 to 500	17.5×10^7

*Cell line dependent. Based upon a density of 1×10^5 cells/cm^2.

Surface coatings and feeder cells

Most tissue culture work uses disposable polystyrene vessels. The vessel surface is treated to render it hydrophilic (wettable). Most cell lines in the ATCC collection are cultivated on treated plastic surfaces in dishes, flasks, or roller bottles. Since the properties of tissue culture plastic can vary among manufacturers, samples should be evaluated for their ability to support cell growth and propagation prior to use. ATCC routinely uses the SelecT™ fully automated cell culture system.

Some fastidious cell lines require further treatment of the growth surface before they will attach and proliferate. The most common techniques include coating the surface with serum, collagen (ATCC® No. 30-2511), laminin (ATCC® No. 30-2505), gelatin, poly-L-lysine, or fibronectin.

Beyond simple attachment, some cells require specialized surface treatment in order for them to differentiate into more tissue-like formations. For example, endothelial cells will form tubules and neuronal cells will extend neurite processes when cultured on a surface of extracellular matrix (ECM) proteins (ATCC® No. 30-2501 and 30-2503). These ECM proteins closely resemble the basal lamina membrane surrounding cells in tissue and not only provide attachment points, but modulate signal transduction from external growth factors and hormones, influence the permeability of ions and nutrients, and actively "communicate" with intracellular processes through integrins.

Finally, some cells, particularly when seeded at low densities as for cloning, require the support of living cells. Most cells are "happier in a crowd." Feeder layer cells supply a crowd by conditioning the medium through metabolic leakage and/or the active secretion of growth and other factors. They also provide a support matrix for cell attachment and proliferation. To prevent feeder layer cells from overgrowing the cells of interest, they are treated to prevent division. Common methods include irradiation with X-rays or gamma rays or treatment with mitomycin C. Each of these treatments damages cellular DNA so that the cells continue to metabolize but can no longer proliferate. ATCC offers a variety of well-characterized feeder cells. See page 179 for the complete list.

Cryopreservation

Most cell cultures can be stored for many years, if not indefinitely, at temperatures below –130°C (cryopreservation). ATCC has recovered cells from cultures cryopreserved for more than 40 years. The many advantages of cryopreservation far outweigh the required investment in equipment and reagents. These advantages include:

- Generation of safety stocks to ensure against loss of the culture from equipment failures or contamination by microorganisms or other cell lines.
- Elimination of the time, energy, and materials required to maintain cultures not in immediate use.
- Preservation of cells with finite population doublings (that will ultimately senesce).
- Insurance against phenotypic drift in the culture due to genetic instability and/or selective pressure.
- Creating a standard reagent to be used for a series of experiments.

Overview

As the cell suspension is cooled below the freezing point, ice crystals form and the concentration of the solutes in the suspension increases. Intracellular ice can be minimized if water within the cell is allowed to escape by osmosis during the cooling process. A slow cooling rate, generally –1°C per minute, facilitates this process. However, as the cells lose water, they shrink in size and will quickly lose viability if they go beyond a minimum volume. The addition of cryoprotectant agents such as glycerol or dimethylsulfoxide (DMSO) will mitigate these effects.

The standard procedure for cryopreservation is to freeze cells slowly until they reach a temperature below –70°C in medium that includes a cryoprotectant. Vials are transferred to a liquid-nitrogen freezer to maintain them at temperatures below –130°C.

The recovery of cryopreserved cells is straightforward: Cells are thawed rapidly in a water bath at 37°C, removed from the freeze-medium by gentle centrifugation and/or diluted with growth medium, and seeded in a culture vessel in complete growth medium.

There are numerous factors which affect the viability of recovered cells. Modify the procedure for each cell line to attain optimal cell viability upon recovery. Some of the critical parameters for optimization include the composition of the freeze medium, the growth phase of the culture, the stage of the cell in the cell cycle, and the number and concentration of cells within the freezing solution.

ATCC provides information on cryopreservation for all cell lines on the Product Information Sheet. Most ATCC cell lines are frozen with a cryopreservation medium consisting of 5% DMSO and complete growth medium.

Freeze medium

Glycerol and DMSO at 5 to 10% are the most common cryoprotectant agents. While DMSO can be toxic to cells, it penetrates them much faster than glycerol and yields more reproducible results. Unfortunately, DMSO can cause some cells to differentiate (e.g., HL-60 promyeloblast cells) and may be too toxic for some cells (e.g., HBE4-E6/E7 lung epithelial cells). Glycerol should be used in these instances. Glycerol can be sterilized by autoclaving whereas DMSO must be sterilized by filtration. Care should be used when handling any DMSO solution as it will rapidly penetrate intact skin and may carry toxic contaminants along with it.

Use only reagent-grade (or better, such as cell culture-grade) DMSO or glycerol. Store both in aliquots protected from light. ATCC offers DMSO (ATCC® No. 4-X) that has been thoroughly tested for cell culture use.

For cells grown in serum-free medium, adding 50% conditioned medium (serum-free medium in which the cells were grown for 24 hours) to both the cell freezing and the recovery medium may improve recovery and survival. The addition of 10 to 20% cell culture-grade bovine serum albumin to serum-free freezing medium may also increase postfreeze survival.

Other variations of freeze medium formulations include high (up to 90%) concentrations of serum which presumably supplies some cryoprotection as well as additional growth factors; use of a balanced salt solution designed for hypothermal conditions in place of medium designed for 37°C incubation; and the addition of apoptotic inhibitors which may prevent delayed onset cell death following recovery.[21] Optimum formulations for individual cell lines need to be determined empirically.

Equipment

Cryopreservation vials

There are two materials to choose from for cryopreservation vials: glass or plastic. Glass vials are more difficult to work with; they need to be sterilized before use, they do not come with labels (information is imprinted into the glass), they need to be sealed with a hot flame, and they can be difficult to open. However, they are preferred for long-term storage (many years) of valuable cultures and are considered fail-safe once properly sealed. ATCC uses glass vials for the storage of seed stocks which are placed in the lower level of the liquid nitrogen tank. Plastic vials are used for the storage of distribution stocks.

Plastic vials come in two varieties: those with an internal thread and silicone gasket and those with an external thread. The internal-thread version was the first commercially available, but has some disadvantages over the external-thread version. For example, while the silicone gasket provides an excellent seal, it needs to be tightened just right; too tight or too loose and the vial will leak.

Cryopreservation

Controlled-rate freezing chambers

There are several means to achieve a cooling rate of –1°C per minute. The best is with a computer controlled, programmable electronic freezing unit (such as CryoMed Freeze) which rigorously maintains this rate of cooling. This is the method used exclusively at ATCC. Such equipment is relatively expensive and absolutely necessary for only the most sensitive cells.

A less costly approach is to place the cryopreservation vials into an insulated chamber and cool for 24 hours in a mechanical freezer at –70°C or lower. There are several commercially available freezing chambers which achieve a cooling rate very close to the ideal –1°C per minute (Mr. Frosty, Nalgene ATCC® No. 5100-0001; or StrataCooler, Stratagene ATCC® No. 400005). Alternately, the vials can be placed into a polystyrene box with 15-mm (3/4 inch) thick walls and 1-liter capacity packed with paper, cotton wool, or foam peanuts for insulation.

Liquid nitrogen freezer storage

The ultra-low temperatures (below –130°C) required for long-term storage can be maintained by specialized electric freezers or more commonly by liquid nitrogen freezers. There are two basic types of liquid nitrogen storage systems: immersing vials in the liquid and holding vials in the vapor phase above the liquid. The liquid-phase system holds more nitrogen and thus requires less maintenance. However, there is always a chance that some liquid will enter improperly sealed vials which may explode when retrieved. For this reason ATCC strongly recommends storage in vapor-phase systems.

Vapor-phase systems create a vertical temperature gradient within the container. The temperature in the liquid nitrogen at the bottom will be –196°C, whereas the temperature at the top will vary depending upon the amount of liquid nitrogen at the bottom as well as the amount of time the container is opened. To ensure safe storage of cells, be sure to keep enough liquid nitrogen in the container so that the temperature at the top is –130°C or lower. All storage systems should be equipped with temperature alarms.

Cryopreservation procedure

The procedure below will work for most cell cultures and should be modified as needed. Freeze medium formulations for all ATCC cell lines are provided on the Product Information Sheet. Harvest cells in exponential growth.

1. Check your cell culture for contamination from bacteria, fungi, mycoplasma, and viruses (see Contamination, page 277) immediately before cryopreservation. In most cases, the results of the contamination screen will be available some time after the cultures are cryopreserved (10 to 14 days). If contamination is confirmed, then destroy the frozen material.
2. Prepare a freeze medium consisting of complete growth medium and 5% DMSO (ATCC® No. 4-X). Do not add undiluted DMSO to a cell suspension as dissolution of DMSO in aqueous solutions gives off heat.
3. Collect cells by gentle centrifugation (10 minutes at 125 × *g*) and resuspend them in the freeze medium at a concentration of 1×10^6 to 5×10^6 viable cells/ml. Continue to maintain the cells in culture until the viability of the recovered cells is confirmed (see Step 9).
4. Label the appropriate number of vials with the name of the cell line and the date. Then add 1 to 1.8 ml of the cell suspension to each of the vials (depending upon the volume of the vial) and seal.
5. Allow cells to equilibrate in the freeze medium at room temperature for a minimum of 15 minutes but no longer than 40. This time is usually taken up in dispensing aliquots of the cell suspension into the vials. After 40 minutes, cell viability may decline due to the DMSO.
6. Place the vials into a pre-cooled (4°C), controlled-rate freeze chamber and place the chamber in a mechanical freezer at –70°C (or colder) for at least 24 hours. Alternately, use a pre-cooled (4°C) programmable freezer unit set to cool the vials at –1°C per minute until a temperature below –40°C is achieved and then set to abruptly drop to –130°C.
7. Quickly transfer the vials to a liquid nitrogen or –130°C freezer. Frozen material will warm up at a rate of 10°C per minute and cells will deteriorate rapidly if warmed above –50°C.
8. Record the location and details of the freeze.
9. After 24 hours at –130°C, remove one vial, restore the cells in culture medium, and determine their viability and sterility.

Recovery of cryopreserved cells

The cell solution in the frozen vial needs to be warmed as rapidly as possible and then immediately combined with complete culture medium and seeded into an appropriate flask. While cells grown in monolayers can be recovered from cryopreservation in multiwell plates, the results are not as consistent as with flasks.

Some cell lines, such as hybridoma cultures, take several days before they fully recover from cryopreservation. Some hybridomas show low viability on the first day in culture and will generate cellular debris. Viability for most cells declines and reaches a nadir at 24 hours post-thaw. Most, if not all, of this decline appears to be due to apoptosis (as opposed to necrosis) induced by the stress of the cryopreservation process.[22] After this time point, cells begin to recover and enter exponential growth.

1. Prepare a culture vessel (T-75 flask) so that it contains at least 10 ml of the appropriate culture medium equilibrated for temperature and pH.
2. Remove the vial from the liquid nitrogen freezer and thaw by gentle agitation in a 37°C water bath (or a bath set at the normal growth temperature for that cell line). Thaw rapidly until ice crystals have melted (approximately 2 minutes).
3. Remove the vial from the water bath and decontaminate it by dipping in or spraying with 70% ethanol. Follow strict aseptic conditions in a laminar flow tissue culture hood for all further

Cryopreservation

manipulations.

4. Unscrew the top of the vial and transfer the contents to a sterile centrifuge tube containing 9 ml complete growth medium. Remove the cryoprotectant agent by gentle centrifugation (10 minutes at 125 × *g*). Discard the supernatant, taking care not to disturb the soft pellet, and resuspend the cells in 1 or 2 ml of complete growth medium. Pipette gently to loosen the pellet and break apart clumps. (If the cells normally grow as clusters, avoid over-pipetting during resuspension.) Transfer the cell suspension into the medium in the culture vessel and mix thoroughly.
5. Examine the cultures after 24 hours and subculture as needed.

Contamination

Contamination of cells in culture can arise from many sources including other cell lines, reagents, supplies such as pipettes and culture vessels, equipment such as tissue culture hoods and incubators, and laboratory personnel. While the potential for contamination is constant, the risk can be reduced or eliminated by proper precautions: using only reagents of known quality and sterility, quarantining new cell lines until they are tested to be free from contamination, performing routine maintenance and cleaning of all equipment, and properly training cell culture personnel.

Checking for microbial contamination

When most bacterial contamination occurs, it usually occurs within a few days and is typically obvious to the naked eye: Distinct changes to the medium such as turbidity, presence of particles visible in suspension, and a rapid decline in pH (yellow color, indicating acidity) are all indicators of bacterial contamination. Fastidious bacteria species that grow very slowly can be difficult to detect.

Fungal contaminants may or may not cause a change in the pH of the medium and can be distinguished from bacteria by checking for the presence of filamentous structures in the suspension. Yeast cells are larger than bacteria, but may not appreciably change the pH of the medium, and will appear as separate round or ovoid particles.

Microbacterial media which can be used to test for bacterial and fungal contamination include blood agar, thioglycollate broth, tryptic soy broth, BHI broth, Sabouraud broth, YM broth, and nutrient broth with 2% yeast extract.[23] However, some microbial contamination is not apparent. For example, the use of antibiotics can suppress bacterial growth and thus mask contamination. Some viral infections do not alter the morphology of the cells, and detection of mycoplasma contamination requires specific assays.

Mycoplasma contamination

Cell lines are screened for mycoplasma contamination by direct (agarose and broth culture) and indirect (Hoechst) methods.[24,25] For example, the fluorochrome Hoechst DNA stain will bind to the DNA of mycoplasma and the organisms can be detected easily when examined using a microscope equipped with appropriate fluorescence optics. The direct culture method requiring both broth and agar will permit isolation of cultivable strains as apparent by appearance of characteristic mycoplasma colonies on the agar medium.

Both direct and indirect methods for detection of mycoplasma are used at ATCC several times while a cell line is expanded for the preparation of the token, seed and distribution stocks.

Cell cultures can be submitted to the ATCC Mycoplasma Testing Service. See the ATCC Services section of the website for details.

Treating for microbial contamination

Eliminating contamination from a cell line is time consuming and does not always work. Discarding the culture and starting over is preferred. However, if the cells are unique and irreplaceable, one should first identify the contaminant and select a suitable antibiotic for treatment. It is best to test the contaminating microbe for its antibiotic sensitivity prior to treatment; this allows for a shorter treatment time and limits exposure of the cell line to potentially damaging reagents.

The cells are cultured for 1 to 2 weeks in the presence of the antibiotic, and then cultured without antibiotic for 1 to 2 months. At this point, the line should be retested with a very sensitive test method to make sure that the culture is clean. Periodic retesting should be employed to make sure that the contaminant does not reappear. Since antibiotics may be toxic to cells, a selected population that no longer exhibits qualities of the parental line may result. It may be necessary to examine the cured culture to determine if it is sufficiently similar to the original line.

Cellular cross-contamination

Cross-contamination of one cell line with another can sometimes lead to the replacement of the original cell with the contaminant, particularly when the contaminant grows faster than the original line. HeLa cells are perhaps the most famous example of a cross-contaminating cell line overtaking and then masquerading as the original.

In the 1950s and 1960s, many continuous lines were unknowingly cross-contaminated with other cell lines including HeLa cells. In the 1970s and 1980s, as many as one in three cell lines deposited in cell repositories were imposters.[26] This cross-contamination was only uncovered with the development of suitable genetic markers beginning in 1967.[27] Indeed, several "unique" cell lines in ATCC's collection turned out to be HeLa cells upon further study. Despite the confirmation of their HeLa cell origin, cytogenetic analysis suggests that there are differences among these HeLa-derived cell lines. Several of them possess unique properties. However, these cell lines should not be used as functional models of their claimed tissues of origin.

More recently, ATCC and other cell repositories have used DNA polymorphisms in addition to enzyme polymorphisms, HLA typing, and karyotyping to confirm the identity of their cell lines. One of the most reliable methods to study DNA polymorphisms is the profiling of short tandem repeats (STR) by PCR amplification followed by capillary electrophoresis.[28] STR profiles for all ATCC human cell lines are available on the website in the catalogue descriptions.

Routine testing

Test cell cultures on a regular basis to ensure the absence of contamination from both microorganisms as well as from other cell lines. If contamination is found, discard the culture and start fresh with a new stock.

Biosafety

The need for precautions when experimenting with cells in culture depends upon the source and nature of the biological material, the experimental procedure, and the laboratory/containment conditions. Since every situation is different, the risks need to be identified and appropriate precautions need to be taken before any work begins.

More information on risk assessment and precautions can be found in the Center for Disease Control (CDC) publication Biosafety in Microbiological and Biomedical Laboratories, (BMBL) 4th Edition.[29] The text of this publication is available in its entirety online (www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm). Information on agent risk assessment and a description of the four biosafety levels can be found in this publication.

ATCC assigns a biosafety level (BSL) to each cell line for purposes of packaging for safe shipment. When a cell line is known to contain an etiologic agent, ATCC classification is at least comparable to the BSL assigned to the agent by the CDC and in some cases the ATCC designation is more restrictive. ATCC follows federal biosafety guidelines and takes several factors into consideration when assessing potential hazard.

Biosafety Level 1

- Cell lines with animal origin not included under Biosafety Level 2

Biosafety Level 2

- Cell lines that harbor mycoplasma or any other BSL 2 agent*
- Cell lines exposed to or transformed by a primate oncogenic virus
- Primate cell lines that contain viruses
- Cell lines carrying a part of certain viral genomes, even if whole virus is not released from the cell [30]

As the recipient of a cell line, take into account not only the nature of the material but also the manipulations employed during its handling when assessing the potential laboratory risk. For example, procedures involving large volumes of cell lines that contain HIV or that include manipulation of HIV in high concentration should be conducted under BSL 3 conditions.[29]

Note: It is not possible to screen cell lines for the presence of every agent. For added precaution, ATCC handles all cell lines under BSL 2 practices, even those classified as BSL 1. It is prudent to treat all mammalian cell lines as potentially hazardous.

*Some patent cell lines at ATCC are known to be contaminated with mycoplasma and are noted as such in the catalog.

Glossary

The following glossary was originally published by the Tissue Culture Association Terminology Committee in 1990.[31]

Anchorage-dependent cells or cultures. Cells, or cultures derived from them, which will grow, survive, or maintain function only when attached to a surface such as glass or plastic. The use of this term does not imply that the cells are normal or that they are not neoplastically transformed.

Aneuploid. The situation in which the nucleus of a cell does not contain an exact multiple of the haploid number of chromosomes, one or more chromosomes being present in greater or lesser number than the rest. The chromosomes may or may not show rearrangements.

Aseptic technique. Procedures used to prevent the introduction of fungi, bacteria, viruses, mycoplasma, or other microorganisms in cell, tissue, and organ cultures. Although these procedures are used to prevent microbial contamination of cultures, they also prevent cross-contamination of cell cultures as well.

Attachment efficiency. The percentage of cells plated (seeded, inoculated) which attach to the surface of the culture vessel within a specified period of time. The conditions under which such a determination is made should always be stated.

Autocrine cell. In animals, a cell which produces hormones, growth factors, or other signaling substances for which it also expresses the corresponding receptors. (See also *endocrine* and *paracrine*.)

Cell culture. Term used to denote the maintenance or cultivation of cells in vitro including the culture of single cells. In cell cultures, the cells are no longer organized into tissues.

Cell generation time. The interval between consecutive divisions of a cell. This interval can best be determined, at present, with the aid of cinephotomicrography. This term is not synonymous with *population doubling time*.

Cell hybridization. The fusion of two or more dissimilar cells leading to the formation of a synkaryon.

Cell line. A *cell line* arises from a primary culture at the time of the first successful subculture. The term implies that cultures from it consist of lineages of cells originally present in the primary culture. The terms *finite* or *continuous* are used as prefixes if the status of the culture is known. If not, the term *line* will suffice. The term *continuous line* replaces the term *established line.* In any published description of a culture, one must make every attempt to publish the characterization or history of the culture. If such has already been published, a reference to the original publication must be made. In obtaining a culture from another laboratory, the proper designation of the culture, as originally named and described, must be maintained and any deviations in cultivation from the original must be reported in any publication.

Cell strain. A cell strain is derived either from a primary culture or a cell line by the selection or cloning of cells having specific properties or markers. In describing a cell strain, its specific features must be defined. The terms *finite* or *continuous* are to be used as prefixes if the status of the culture is known. If not, the term *strain* will suffice. In any published description of a cell strain, one must make every attempt to publish the characterization or history of the strain. If such has already been published, a reference to the original publication must be made. In obtaining a culture from another laboratory, the proper designation of the culture, as originally named and described, must be maintained and any deviations in cultivation from the original must be reported in any publication.

Chemically defined medium. A nutritive solution for culturing cells in which each component is specifiable and, ideally, is of known chemical structure.

Clone. In animal cell culture terminology, a population of cells derived from a single cell by mitoses. A clone is not necessarily homogeneous and therefore the terms *clone* and *cloned* do not indicate homogeneity in a cell population, genetic or otherwise.

Cloning efficiency. The percentage of cells plated (seeded, inoculated) that form a clone. One must be certain that the colonies formed arose from single cells in order to properly use this term. (See *colony forming efficiency*.)

Colony forming efficiency. The percentage of cells plated (seeded, inoculated) that form a colony.

Contact inhibition of locomotion. A phenomenon characterizing certain cells in which two cells meet, locomotory activity diminishes and the forward motion of one cell over the surface of the other is stopped.

Continuous cell culture. A culture which is apparently capable of an unlimited number of population doublings, often referred to as an immortal cell culture. Such cells may or may not express the characteristics of in vitro neoplastic or malignant transformation. (See also *immortalization*.)

Crisis. A stage of the in vitro transformation of cells. It is characterized by reduced proliferation of the culture, abnormal mitotic figures, detachment of cells from the culture substrate, and the formation of multinucleated or giant cells. During this massive cultural degeneration, a small number of colonies usually, but not always, survives and gives rise to a culture with an apparent unlimited in vitro lifespan. This process was first described in human cells following infection with an oncogenic virus (SV40). See also *cell line, in vitro transformation,* and *in vitro senescence.*

Cryopreservation. Ultra-low temperature storage of cells, tissues, embryos, or seeds. This storage is usually carried out using temperatures below –100°C.

Glossary

Density-dependent inhibition of growth. Mitotic inhibition correlated with increased cell density.

Differentiated. Cells in culture that maintain all or much of the specialized structure and function typical of the cell type in vivo.

Diploid. The state of the cell in which all chromosomes, except sex chromosomes, are two in number and are structurally identical with those of the species from which the culture was derived.

Electroporation. Creation by means of an electrical current of transient pores in the plasmalemma usually for the purpose of introducing exogenous material, especially DNA, from the medium.

Embryo culture. In vitro development or maintenance of isolated mature or immature embryos.

Embryogenesis. The process of embryo initiation and development.

Endocrine cell. In animals, a cell which produces hormones, growth factors or other signaling substances for which the target cells, expressing the corresponding receptors, are located at a distance. (See also *autocrine* or *paracrine*.)

Epithelial-like. Resembling or characteristic of, or having the form or appearance of, epithelial cells. In order to define a cell as an epithelial cell, it must possess characteristics typical of epithelial cells. Often one can be certain of the histologic origin and/or function of the cells placed into culture and, under these conditions, one can be reasonably confident in designating the cells as epithelial. The individual reporting on such cells should use as many parameters as possible in assigning this term to a culture. Until a rigorous definition is possible, it is more correct to use the term *epithelial-like*.

Euploid. The situation in which the nucleus of a cell contains exact multiples of the haploid number of chromosomes.

Feeder layer. A layer of cells (usually irradiated or mitomycin-C treated) that are nondividing but metabolically active, upon which a fastidious cell type is cultured.

Finite cell culture. A culture which is capable of only a limited number of population doublings after which the culture ceases proliferation. (See *in vitro senescence*.)

Heterokaryon. A cell possessing two or more genetically different nuclei in a common cytoplasm, usually derived as a result of cell-to-cell fusion.

Heteroploid. A culture whose cells contain chromosome number other than the diploid number. This is a term used only to describe a culture and is not used to describe individual cells. Thus, a heteroploid culture would be one which contains aneuploid cells.

Histiotypic. The in vitro resemblance of cells in culture to a tissue in form, function, or both. For example, a suspension of fibroblast-like cells may secrete a glycosaminoglycan-collagen matrix and the result is a structure resembling fibrous connective tissue, which is, therefore, histiotypic. This term is not meant to be used along with *culture*. Thus, a tissue culture system demonstrating form and function typical of the cells in vivo would be said to be histiotypic.

Homokaryon. A cell possessing two or more genetically identical nuclei in a common cytoplasm, derived as a result of cell-to-cell fusion.

Hybridoma. The cell which results from the fusion of an antibody-producing tumor cell (myeloma) and an antigenically stimulated normal plasma cell. Such cells are constructed because they produce a single antibody directed against the antigen epitope which stimulated the plasma cell. This antibody is referred to as a *monoclonal antibody*.

Immortalization. The attainment by a cell culture, whether by perturbation or intrinsically, of the attributes of a continuous cell line. An immortalized cell is not necessarily one which is neoplastically or malignantly transformed.

In vitro senescence. The inability of a vertebrate cell culture to grow beyond a finite number of population doublings. Neither invertebrate nor plant cell cultures exhibit this property.

In vitro transformation. A heritable change occurring in cells in culture, either intrinsically or from treatment with chemical carcinogens, oncongenic viruses, irradiation, transfection with oncogenes, etc., which leads to the acquisition of altered morphological, antigenic, neoplastic, proliferative, or other properties. This expression is distinguished from in vitro neoplastic transformation in that the alterations occurring in the cell population may not always include the ability of the cells to produce tumors in appropriate hosts. The type of transformation should always be specified in any description.

Organ culture. The maintenance or growth of organ primordia or the whole or parts of an organ in vitro in a way that may allow differentiation and preservation of the architecture and/or function.

Paracrine. In animals, a cell which produces hormones, growth factors or other signaling substances for which the target cells, expressing the corresponding receptors, are located in its vicinity, or in a group adjacent to it. (See also *autocrine* and *endocrine*.)

Passage. The transfer or transplantation of cells, with or without dilution, from one culture vessel to another. It is understood that any time cells are transferred from one vessel to another, a certain portion of the cells may be lost, and therefore dilution of cells, whether deliberate or not, may occur. This term is synonymous with *subculture*.

Glossary

Passage number. The number of times the cells in the culture have been subcultured or passaged. In descriptions of this process, the ratio or dilution of the cells should be stated so that the relative cultural "age" can be ascertained.

Plating efficiency. This term originally encompassed the terms *attachment efficiency, cloning efficiency,* and *colony forming efficiency;* it is now better to use one or more of them in its place because *plating* is not sufficiently descriptive. (See *attachment efficiency, cloning efficiency,* and *colony forming efficiency.*)

Population density. The number of cells per unit area or volume of a culture vessel, or the number of cells per unit volume of medium in a suspension culture.

Population doubling level. The total number of population doublings of a cell line or strain since its initiation in vitro. This term is synonymous with *cell generation time*.

Population doubling time. The interval, calculated during the logarithmic phase of growth in which cells double in number; for example, 1.0×10^6 cells increase to 2.0×10^6 cells. This term is not synonymous with *cell generation time*.

Primary culture. A culture started from cells, tissues, or organs taken directly from organisms. A primary culture may be regarded as such until it is successfully subcultured for the first time. It then becomes a *cell line*.

Pseudodiploid. The condition in which the number of chromosomes in a cell is diploid but, as a result of chromosomal rearrangements, the karyotype is abnormal and linkage relationships may be disrupted.

Saturation density. The maximum cell number attainable, under specified culture conditions, in a culture vessel. This term is usually expressed as the number of cells per square centimeter in a monolayer culture or the number of cells per cubic centimeter in a suspension culture.

Suspension culture. A type of culture in which cells, or aggregates of cells, multiply while suspended in liquid medium.

Synkaryon. A hybrid cell which results from the fusion of the nuclei it carries.

Tissue culture. The maintenance or growth of tissues in vitro in a way that may allow differentiation and preservation of the architecture and/or function.

Transfection. The transfer, for the purpose of genomic integration, of foreign DNA into cells in culture. The traditional microbiological usage of this term implied that the DNA being transferred was derived from a virus. The definition as stated here describes the general transfer of DNA irrespective of its source.

Undifferentiated. With animal cells, this is the state wherein the cell in culture lacks the specialized structure and/or function of the cell type in vivo.

Formulations of Media Not Available from ATCC

There are cell lines in the collection that require media which are not currently sold by ATCC. Some media may require the addition of serum or other supplements. Refer to the Product Information Sheet for specific recommendations for each cell line.

ACL-4

A medium for the cultivation of human tumor cell lines with or without serum.[32] It consists of a 1:1 mixture of RPMI 1640 or Ham's F12 or F12K and Dulbecco's Modification of Eagle's Medium plus the following:

Insulin	20 µg/ml
Transferrin	10 µg/ml
Sodium selenite	25 nM
Hydrocortisone	50 nM
Epidermal growth factor	1 ng/ml
Ethanolamine	10 µM
Phosphorylethanolamine	10 µM
Triiodothyronine	100 pM
Bovine serum albumin	2 mg/ml
4-(2-Hydroxyethyl)-1-piperazine-ethanesulfonic acid buffer	10 mM
Sodium pyruvate	0.5 mM
Glutamine	2 mM

Eagle's Basal Medium (BME)

A simple synthetic medium in routine use. Not adequate for more fastidious cell types.[34,35]

L-Amino Acids	mg/l
Arginine	17.5
Cystine	12.0
Glutamine	292.0
Histidine	7.75
Isoleucine	26.0
Leucine	26.0
Lysine	29.0
Methionine	7.5
Phenylalanine	16.0
Threonine	24.0
Tryptophan	4.0
Tyrosine	18.0
Valine	23.0
Vitamins	
Biotin	0.24
Choline	0.12
Folic acid	0.44
Nicotinamide	0.12
Pantothenic acid	0.20
Pyridoxal HCl	0.20
Riboflavin	0.04
Thiamine HCl	0.34
Inorganic Salts	
NaCl	5845.0
KCl	373.0
$Na_2HPO_4 \cdot H_2O$	138.0
$MgCl_2 \cdot 6H_2O$	102.0
$CaCl_2$	111.1
$NaHCO_3$	1680.0
Other Components	
Glucose	900.0
Phenol red	5.0

Ham's MCDB 105 and 107

The formulation for MCDB 107 is given below. For MCDB 105, change glycine to 7.51 mg/liter and omit KCl.

L-Amino Acids	mg/l
Alanine	8.9
Arginine HCl	211.7
Asparagine $\cdot H_2O$	15.0
Aspartic acid	13.3
Cysteine HCl $\cdot H_2O$	8.8
Glutamic acid	14.7
Glutamine	365.3
Glycine	22.5
Histidine HCl $\cdot H_2O$	21.0
Isoleucine	3.9
Leucine	13.1
Lysine HC	36.5
Methionine	4.5
Phenylalanine	5.0
Proline	34.5
Serine	10.5
Threonine	11.9
Tryptophan	2.0
Tyrosine, 2Na $\cdot$ 2H_2O	7.8
Valine	11.7
Vitamins	
d-Biotin	0.007
D-Ca pantothenate	0.24
Choline chloride	14.0
Folinic acid, calcium salt	0.0006
i-Inositol	18.0
Niacinamide	6.11
Pyridoxine HCl	0.06
Riboflavin	0.11
Thiamine HCl	0.34
Vitamin B_{12}	0.136
Inorganic Salts	
$CaCl_2$ (anhyd)	110.99
KCl	149.1
KH_2PO_4	408.27
$MgSO_4$ (anhyd)	120.38
NaCl	6546.00
$CuSO_4 \cdot 5H_2O$	0.00025
$FeSO_4 \cdot 7H_2O$	1.390
$MnSO_4 \cdot 5H_2O$	0.00024
$(NH_4)_6Mo_7O_{24} \cdot 4H_2O$	0.00124
$NiCl_2 \cdot 6H_2O$	0.00012
H_2SeO_3	0.00387
$Na_2SiO_3 \cdot 9H_2O$	0.142
$SnCl_2 \cdot 2H_2O$	0.00011
NH_4VO_3	0.00059
$ZnSO_4 \cdot 7H_2O$	0.144
Other Components	

Formulations of Media Not Available from ATCC

Adenine HCl	1.72
Linoleic acid	0.0028
DL-a-Lipoic acid	0.0021
Putrescine 2HC	0.00016
Thymidine	0.0727
Glucose	720.64
HEPES	7149.00
Phenol red, sodium salt	1.242
Sodium pyruvate	110.0

Adjust pH to 7.6. Use 2% CO_2.

HITES

A medium for the selective cultivation of small cell lung carcinomas, adenocarcinomas, and tumors from other organ sites with and without serum.[36] It can be formulated using either RPMI 1640 or a 1:1 mixture of DMEM:F12K and supplemented with the following components:

Insulin	5 µg/ml
Transferrin	10 µg/ml
Sodium selenite	3.0×10^{-8} M
Hydrocortisone	1.0×10^{-8} M
β-Estradiol	1.0×10^{-8} M
HEPES	10 mM
L-Glutamine	2 mM

Mitsuhashi and Maramorosch Medium for Insect Tissue Culture

M and M medium is no longer available commercially. Consult reference 37 for additional information on this formulation.

Inorganic Salts	mg/l
$CaCl_2 \cdot 2H_2O$	200.0
KCl	200.0
$MgCl_2 \cdot 6H_2O$	100.0
NaCl	7000.0
$NaHCO_3$	120.0
$NaH_2PO_4 \cdot H_2O$	200.0
Other Components	
D-Glucose	4000.0
Lactalbumin hydrolysate	6500.0
Yeastolate	5000.0

Adjust pH to 6.5 with 2N KOH.

Waymouth's MB 752/1

Capable of supporting growth of several cell lines in the absence of serum.[34,38]

L-Amino Acids	mg/l
Arginine HCl	75.0
Aspartic acid	60.0
Cysteine HCl	90.0
Cystine	15.0
Glutamic acid	150.0
Glutamine	350.0
Glycine	50.0
Histidine HCl	150.0
Isoleucine	25.0
Leucine	50.0
Lysine HCl	240.0
Methionine	50.0
Phenylalanine	50.0
Proline	50.0
Threonine	75.0
Tryptophan	40.0
Tyrosine	40.0
Valine	65.0
Vitamins	
Ascorbic acid	17.5
Biotin	0.02
Ca-pantothenate	1.0
Choline HCl	250.0
Cyanocobalamin (Vitamin B_{12})	0.2
Folic acid	0.4
m-Inositol	1.0
Nicotinamide	1.0
Pyridoxine HCl	1.0
Riboflavin	1.0
Thiamine HCl	10.0
Inorganic Salts	
NaCl	6000.0
KCl	150.0
Na_2HPO_4	300.0
KH_2PO_4	80.0
$MgCl_2 \cdot 6H_2O$	240.0
$MgSO_4 \cdot 7H_2O$	200.0
$CaCl_2 \cdot 2H_2O$	120.0
$NaHCO_3$	2240.0
Other Components	
Glucose	5000.0
Hypoxanthine	25.0
Glutathione	15.0
Phenol red	10.0

References

1. Hayflick L and Moorhead PS. Exp. Cell Res. 25: 585-621, 1961.
2. Rubin H. Mech. Aging Devel. 98: 1-35, 1997.
3. Wright WE and Shay JW. Nat. Biotechnol. 20: 682-688, 2002.
4. Capstick PB et al. Exp. Cell Res. 44: 119-128, 1966.
5. Osato et al. J. Immunology 124: 533-540, 1980.
6 McLimans WF. Chapter 5. In: Growth, Nutrition and Metabolism of Cells in Culture, Vol.1. Rothblat GH and Cristofalo VJ, eds. New York: Academic Press; 1972.
7. Freshney RI. Chapter 8. In: Culture of Animal Cells, 5th ed. New York: Wiley-Liss; 2005.
8. Shipman C. Proc. Soc. Exp. Biol. Med. 130: 305, 1969.
9. People CA et al. In Vitro 18: 755, 1982.
10. Spierenberg GT et al. Cancer Res. 44: 2253, 1984.
11. Zigler JS et al. In Vitro 21: 282, 1985.
12. Karmiol S. Development of serum free media. In: Master JRW, ed. Animal Cell Culture, 3rd ed. Oxford: Oxford University Press; 2000.
13. Jacoby WB and Pasten IH, eds. Chapter 7. In: Methods in Enzymology: Cell Culture, Vol. 58. New York: Academic Press; 1979.
14. Bolin SR et al. J. Virol. Methods 48: 211, 1994.
15. Hyclone, Inc. Art to Science 15(1): 1-6, 1996.
16. Rudnicki MA and McBurney MW. Teratocarcinomas and Embryonic Stem Cells - A Practical Approach. Oxford: IRL Press Ltd.; 1987: p. 75.
17. Weiss SA et al. Meth. Mol. Biol. 39: 65, 1995.
18. Gabridge MG. Vessels for Cell and Tissue Culture. In: Setting Up and Maintenance of Tissue and Cell Cultures. Shannon: Elsevier Scientific Publishers; 1985: pp. 1-19.
19. Balin A.K et al. Atmospheric Stability in Cell Culture Vessels. In Vitro 12: 687-692, 1977.
20. Gey GO. Am. J. Cancer 17: 752-756, 1933.
21. Baust JM et al. Cell Preservation Technology 1: 17-31, 2002.
22. Baust JM et al. Cell Preservation Technology 1: 63-80, 2002.
23. Quality Control Methods for Cell Lines, 2nd edition. Rockville, MD: ATCC; 1992.
24. Freshney RI. Culture of Animal Cells, 5th ed. New York: Wiley-Liss; 2005.
25. Lincoln CK and Gabridge MG. Cell culture contamination: Sources, consequences, prevention and elimination. In: Mather JP and Barnes D, eds. Animal Cell Culture Methods. San Diego: Academic Press; 1998: p. 49.
26. O'Brien SJ. Science 98: 7656-7658, 2001.
27. Gartler SM. NCI Monograph 26: 167-195, 1967.
28. Master JR. et al. Proc. Natl. Acad. Sci. USA 98: 8012-8017, 2001.
29. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Biosafety in Microbiological and Biomedical Laboratories, 4th ed. HHS Publication No. (CDC) 93-8395. Washington DC: U.S. Government Printing Office; 1999. Available online at www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm.
30. Weiss RA. NCI Monograph 48: 183-189, 1978.
31. Schaeffer WI. In Vitro Cell. Dev. Biol. 26: 97-101, 1990.
32. Gazdar AF and Oie HB. Cancer Res. 46: 798-806 and 6011-6012, 1986.
33. Macy ML and Shannon JE. Preparation of medium ATCC-CRCM30. TCA Manual 3: 617-622, 1977.
34. Morton HJ. In Vitro 6: 89-108, 1970.
35. Eagle H. Science 122: 501-504, 1955.
36. Carney DN et al. Proc. Natl. Acad. Sci. USA 78:3185-3189, 1981.
37. Mitsuhashi J. Adv. Cell Culture 2: 133-196, 1982.
38. Waymouth C. J. Natl. Cancer Inst. 22: 1003-1017, 1959.

Cooperation Partners

Increasing success

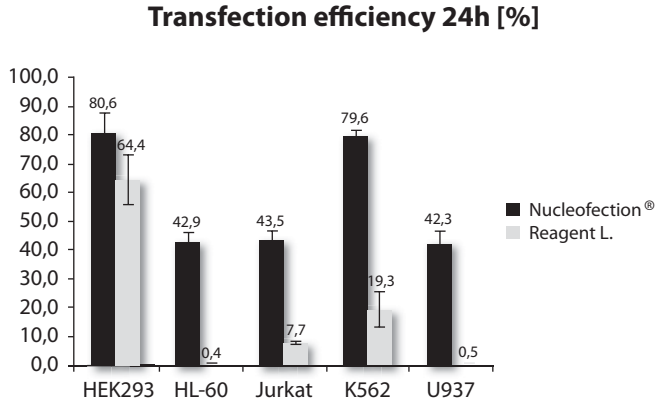
Regarded as standard experimental reagents, cell lines of the highest quality are recommended to ensure reproducible and reliable results of life science products. Manufacturers of quality kits and reagents routinely and exclusively use ATCC cell lines for product development and optimization. Performance of an optimized product can suffer when used with cell lines of inferior quality.

To make it easier to determine the quality of reagents and applications using cell lines, ATCC is working with other life science companies to promote the use of authenticated, quality-tested cell lines by providing access to references, protocols and detailed information about cell cultures and applications.

amaxa Nucleofector® technology is a well established method for the transfer into cells of various substrates (e.g., DNA, siRNA, peptides). Novel electrical parameters in combination with cell-type-specific solutions allow the manipulation of cell lines, including primary cells and lines that previously were not amenable to gene transfer. Optimized protocols (e.g., for specific ATCC cell lines) guarantee high transfer efficiencies along with superior cell survival and minimal impact on cell metabolism.

"It is our goal to enable researchers to genetically manipulate the cell types they consider the best experimental model. In looking for a partner, we needed a large collection of cell lines that came with reliable authentication. ATCC was the obvious choice."

Rainer Christine
CEO
amaxa



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"Combining the strengths of our organizations through this agreement creates a powerful offering for life sciences research."

Lonnie Shoff
Senior Vice President
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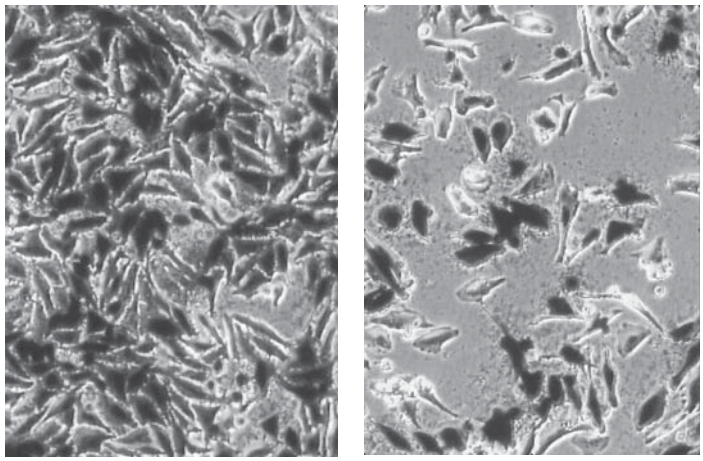
HeLa cells (ATCC® CRL-2™)



(A) FuGENE® HD Transfection Reagent (B) L2K

References and optimized protocols are available for many ATCC cell lines for both amaxa Nucleofector® and Roche FuGENE® Transfection Reagents. See the cell-specific Product Information Page on the ATCC website for more information.

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Last updated September 8, 2003

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