ATCC® bioproducts™

ATCC® High-Performance Media and Sera

ATCC high-performance media and sera are uniquely formulated according to cell-growth recommendations of original cell line depositors and ATCC cell culture specialists.

Using ATCC high-performance media and sera ensures robust cell growth with minimum cell loss especially when reviving cells from cryopreservation. With ATCC media and sera cell cultures grow in a continuous and consistent manner providing a ready supply of cells when needed.

Your **Discoveries** Begin With **Us.**®

Our lab has used media and sera from many companies and has found ATCC formulations to be consistently top caliber. Cryopreserved cells recover much faster and viability is higher saving our lab both time and money.

—Shannon Reagan-Shaw, Research Specialist, University of Wisconsin-Madison

ATCC High-Performance Media and Sera

ATCC media and sera are tailored to exact specifications — discover the difference

There are many media and sera suppliers, but only ATCC thoroughly investigates and identifies specific requirements for individual cell lines for optimal cell culturing.

ATCC scientists subject cell lines to comprehensive evaluations as part of the cell line accessioning process. During these tests, cell lines are fully authenticated and growth parameters are defined to promote uniform and stable growth over several population doublings. These determinations become the basis for ATCC media formulations and sera requirements, which are tested and used on ATCC cell lines.

The ATCC Cell Culture Facility uses ATCC high-performance sera and media to produce and distribute over 3,600 different cell lines. These reagents are made available to the research community only through ATCC.

We have cultured a large number of different cell types and have used many different ATCC media formulations with 100% success. For us, ATCC media has taken the worry out of cell culture.

—Lisa Ryner, Ph.D., Research Scientist, KAI Pharmaceuticals

ATCC High-Performance Sera

ATCC sera result in the most reliable cell growth — experience the difference

ATCC high-performance animal sera come from USDA-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.

Animal Sera product list

Product name	Catalog 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

- Each lot of ATCC high-performance sera is subjected to comprehensive tests for sterility and performance.
- Sterility tests are performed on each lot using current USP 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.

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

ATCC High-Performance Liquid Media

ATCC media formulations are unique — realize the difference

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.

The table on the following page describes the differences that separate ATCC high-performance media from generic formulas.

After a couple of failed attempts to grow ZF-4 cells in medium supplemented with serum from other manufacturers, I switched to ATCC Fetal Bovine Serum (Catalog no. 30-2020). Using this serum, I obtained good recovery, viability and robust growth.

—Dr. Annette Schenck, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany

ATCC Media product list*

Product name	Catalog 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	Optimized energy sources for protein production and nucleic acid metabolism while limiting toxic ammonia build-up
		1500 mg/l sodium bicarbonate	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	1:1 mix of Dulbecco's medium and Ham's F12
		15 mM HEPES	Optimized to maintain pH
		1200 mg/l sodium bicarbonate	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	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
		1500 mg/l sodium bicarbonate	To be used with **5% CO_2** to maintain pH
F-12K Medium	30-2004 (500 ml)	2 mM L-glutamine	Designed to support the growth and differentiation of primary cells with or without serum
		1500 mg/l sodium bicarbonate	To be used with **5% CO_2** to maintain pH
Hybri-Care Medium Powder	46-X (prepares 1 liter)		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	Optimized energy sources for protein production and nucleic acid metabolism while limiting toxic ammonia build-up
		1500 mg/l sodium bicarbonate	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	Optimized energy source for protein production and nucleic acid metabolism while limiting toxic ammonia build-up
		2200 mg/l sodium bicarbonate	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	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.
		10 mM HEPES	Optimized to maintain pH
		1500 mg/l sodium bicarbonate	To be used with **5% CO_2** to maintain pH

* See ATCC website for complete media formulations.

ATCC Cell Culture Reagents

Customize growth conditions with ATCC-tested media supplements and antibiotics

Cell culture reagents product list

Product name	Catalog No.	Uses and Benefits
L-Glutamine Solution 200mM	30-2214 (100 ml)	L-glutamine is an essential amino acid required by virtually all mammalian and insect cells grown in culture.
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 Non-essential 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-Glutamine Solution	30-2220 (100 ml)	This convenient solution allows researchers to add all these common supplements in one step, saving time and reducing the risk of contamination.
Penicillin-Streptomycin Solution	30-2300 (100 ml)	This solution reduces the chances of microbial contamination in cell culture. Antibiotics may eliminate susceptible bacteria but can also interfere with the metabolism of sensitive cells in culture.
Water Cell Culture Grade	30-2205 (500 ml)	Meets WFI quality standards. For use as a diluent or for reconstituting powdered media and salt solutions.
Hank's Balanced Salt Solution	30-2213 (500 ml)	Contains no calcium, magnesium, or phenol red. For washing cells, for use as a diluent, or for use as an inorganic base for media preparation.

I have been using ATCC media for over a year. I am very pleased with excellent cell growth, greater viability, and quick recover. ATCC high-performance media definitely provide better results than other products I have used in the past. I would highly recommend ATCC products for any cell culture scientists in their daily works.

—Shau-Ming Mong, Scientist, Ligand Pharmaceuticals

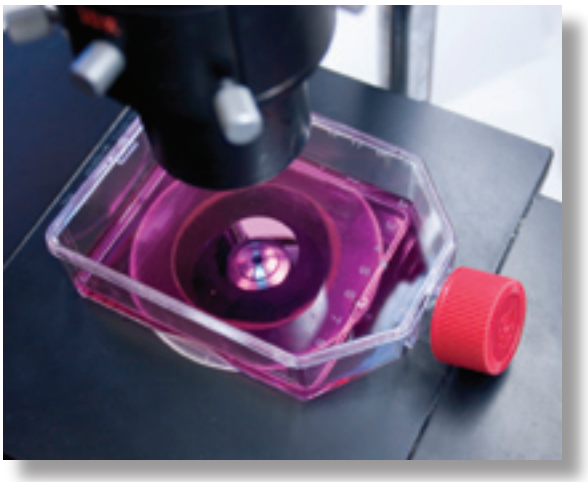
Taking better care of your cells

After your expertise, the most important element of any experiment is the cell line

ATCC provides scientists worldwide with frozen vials of genuine, fully characterized and completely authenticated cell lines. Each bioproduction run of every cell line produced at ATCC is tested for growth and identity verification. The following tips are provided by ATCC scientists to help ensure optimal results and less work overall.

- Revive frozen cells and place them into culture immediately upon receipt. If this is not possible, store cells in liquid nitrogen vapor (below –130° C).

- Avoid "shocking" your cells. Most cell lines exhibit altered characteristics and need time to adapt when introduced to a new and different growth media. Using the same media in which ATCC cell lines were preserved will result in healthier, heartier cells and reduce cell loss due to adaptation.



- Exercise patience. Cell lines react differently to cryopreservation and may require a few days in culture before they attach and grow.

- Be cautious when purchasing media from alternative suppliers, as sodium bicarbonate concentrations may be higher than those employed by ATCC. Slight changes in pH or reduced availability of dissolved CO_2 in the culture medium, may inhibit recovery of cells from cryopreservation or cause delayed attachment and slowed proliferation. All ATCC media, with the exception of Leibovitz's L-15 (catalog no. 30-2008), are formulated for use with 5% CO_2.

- Start with fresh cell lines. Cell lines that have been subcultured multiple times can experience phenotypic and genotypic changes (genetic drift). If you start to experience sudden and inexplicable variations in your experimental results, it may be that the cell line has been subcultured too often and needs to be replaced.

Over the course of more than 40 years, ATCC has generated a wealth of expertise in preserving and propagating cell lines. Contact ATCC Technical Service for further information.

Phone 800-638-6597
703-365-2700
Fax 703-365-2750
Email tech@atcc.org

For more information or to order:

Phone	800-638-6597
	703-365-2700
Fax	703-365-2750
Email	sales@atcc.org

Visit us online at www.atcc.org.

These products are for laboratory use only. Not for human or diagnostics use.

CB21-0906-02-02

ATCC®
P.O. Box 1549
Manassas, VA 20108
Phone: 800.638.6597 or
703.365.2700
Fax: 703.365.2750