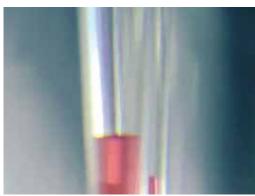






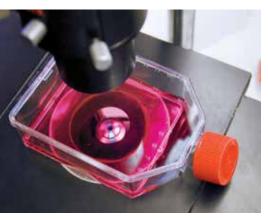
THE ESSENTIALS OF LIFE SCIENCE RESEARCH GLOBALLY DELIVERED™









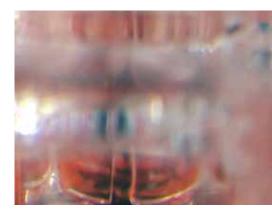












ATCC® HIGH-PERFORMANCE MEDIA, SERA AND REAGENTS

ATCC® high-performance media, sera and reagents are uniquely formulated according to cell-growth recommendations of original cell line depositors combined with the rich history of cell culture knowledge and techniques employed by ATCC scientists for over 40 years.

Using ATCC high-performance media and sera ensures robust, continuous and consistent cell growth with minimum cell loss when reviving cells from cryopreservation. These high-performance products are the same used to recover, expand, preserve and distribute ATCC cell lines, virtually guaranteeing successful cell culture every time you thaw a frozen vial of cells.

ATCC MEDIA, SERA AND REAGENTS ARE TAILORED TO EXACT SPECIFICATIONS – DISCOVER THE DIFFERENCE

There are many media 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 test results become the basis for ATCC high-performance media and sera formulations development.

Tested and optimized, ATCC high-performance media and sera are then used to produce and distribute our more than 3,600 different cell lines. These reagents are made available to the research community only through ATCC.

"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 **CLASSIC FORMULATIONS**

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 media products are manufactured to exact specifications and each lot is rigorously tested to meet the standards of performance and quality imposed by the ATCC production laboratories, where distribution stocks for numerous cell lines are routinely expanded.

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, making it essential to recover frozen cultures in a media formulation consistent with what they were grown in prior to cryopreservation.



for over a year. I am very pleased viability, and quick recovery. ATCC high-performance media definitely provides better results than other I would highly recommend ATCC products for any cell culture scientists in their daily work."

ATCC MEDIA PRODUCT LIST

Product Name	ATCC® No.	Volume
AlphaMEM (Alpha Minimum Essential Medium) with nucleosides	30-2604	500 mL
AlphaMEM (Alpha Minimum Essential Medium) without nucleosides	30-2605	500 mL
Dulbecco's Modified Eagle's Medium (DMEM)	30-2002	500 mL
ES-DMEM	SCRR-2010	500 mL
DMEM:F12 Medium (1:1 Ratio)	30-2006	500 mL
DMEM without phenol red	30-2601	500 mL
Eagle's Minimum Essential Medium (EMEM)	30-2003	500 mL
F12K Medium	30-2004	500 mL
Hybri-Care Medium, Powder	46-X	Prepares 1L
Iscove's Modified Dulbecco's Medium (IMDM)	30-2005	500 mL
Leibovitz's L-15 Medium	30-2008	500 mL
McCoy's 5A Medium, Modified	30-2007	500 mL
MCDB 131 Medium	30-2603	500 mL
RPMI-1640 Medium	30-2001	500 mL
RPMI without phenol red	30-2602	500 mL

With the exception of Leibovitz's L-15 Medium, ATCC media are formulated* for use with 5% CO₃. The amount of sodium bicarbonate in each media ranges from 1.2 g/L to 2.2 g/L (1.5 g/L is the most common concentration).

^{*} See the ATCC website for complete media formulations.

ATCC® PRIMARY CELL SOLUTIONS™ SERUM-FREE & SPECIALTY FORMULATIONS

ATCC® PRIMARY CELL SOLUTIONS™ WILL TAKE YOUR PRIMARY CELL CULTURES - ONE STEP CLOSER TO IN VIVO™

ATCC Primary Cell Solutions is a system of matched components designed to boost growth, maximize functionality, and maintain normal morphology for specific cell types. The combination of an optimized basal medium and cell-specific growth kits is a crucial element in the ATCC Primary Cell Solutions product line. Each set is designed to eliminate the guesswork involved with finding just the right complement of growth factors to support and promote cell proliferation and expression of relevant biomarkers for each cell type — a complete "solution" to your primary cell culture needs.

ATCC Primary Cell Solutions basal media have been quality tested with each respective cell type to ensure that the vital needs of the individual culture are consistently met. ATCC Primary Cell Solutions basal media are sterile, phenol red-free, liquid tissue culture media intended for use as *one* component in a complete system. Supplementation of the basal media with an ATCC Primary Cell Solutions growth kit is essential in transforming the basic growth environment into the extraordinary.

ATCC PRIMARY CELL SOLUTIONS BASAL MEDIA PRODUCT LIST

Product Name	ATCC® No.	Volume
Airway Epithelial Cell Basal Medium	PCS-300-030	485 mL
Dermal Cell Basal Medium	PCS-200-030	485 mL
Fibroblast Basal Medium	PCS-201-030	480 mL
Mesenchymal Stem Cell Basal Medium	PCS-500-030	485 mL
Prostate Epithelial Cell Basal Medium	PCS-440-030	485 mL
Renal Epithelial Cell Basal Medium	PCS-400-030	485 mL
Vascular Cell Basal Medium	PCS-100-030	475 mL

ATCC PRIMARY CELL SOLUTIONS GROWTH KITS PRODUCT LIST

Product Name	ATCC® No.	Pairs With
Adult Melanocyte Growth Kit	PCS-200-042	Dermal Cell Basal Medium
Bronchial Epithelial Cell Growth Kit	PCS-300-040	Airway Epithelial Cell Basal Medium
Endothelial Cell Growth Kit – BBE	PCS-100-040	Vascular Cell Basal Medium
Endothelial Cell Growth Kit – VEGF	PCS-100-041	Vascular Cell Basal Medium
Fibroblast Growth Kit – Serum-free	PCS-201-040	Fibroblast Basal Medium
Fibroblast Growth Kit – Low serum	PCS-201-041	Fibroblast Basal Medium
Keratinocyte Growth Kit	PCS-200-040	Dermal Cell Basal Medium
Melanocyte Growth Kit	PCS-200-041	Dermal Cell Basal Medium
Mesenchymal Stem Cell Growth Kit – Low serum	PCS-500-040	Mesenchymal Stem Cell Basal Medium
Microvascular Endothelial Cell Growth Kit – BBE	PCS-110-040	Vascular Cell Basal Medium
Microvascular Endothelial Cell Growth Kit – VEGF	PCS-110-041	Vascular Cell Basal Medium
Prostate Epithelial Cell Growth Kit	PCS-440-040	Prostate Epithelial Cell Basal Medium
Renal Epithelial Cell Growth Kit	PCS-400-040	Renal Epithelial Cell Basal Medium
Small Airway Epithelial Cell Growth Kit	PCS-301-040	Airway Epithelial Cell Basal Medium
Vascular Smooth Muscle Cell Growth Kit	PCS-100-042	Vascular Cell Basal Medium

New Primary Cell Solutions systems are being added every month. Bookmark the ATCC Primary Cell Solutions webpage at www.atcc.org/PCS for easy reference and check back often.

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.

Each lot of ATCC high-performance sera is subjected to comprehensive tests for sterility and performance, including:

- Sterility tests performed on each lot using current USP methods for bacterial and fungal contamination.
- Comprehensive viral testing adhering to 9 CFR 113.53 guidelines.
- Mycoplasma testing performed via direct culture and Hoechst DNA staining.
- Limulus Amoebocyte Lysate (LAL) assay used to measure Endotoxin values.

All tests are performed post-packaging to guarantee the highest quality, best performing sera.



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,

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

ANIMAL SERA PRODUCT LIST

Product Name	ATCC® No.	Volume
Fetal Bovine Serum	30-2020	500 mL
Fetal Bovine Serum	30-2021	100 mL
Fetal Bovine Serum, ES Qualified*	SCRR-30-2020	500 mL
Calf Bovine Serum	30-2030	500 mL
Calf Bovine Serum	30-2031	100 mL
Horse Serum	30-2040	500 mL
Horse Serum	30-2041	100 mL

^{*} Qualified for mouse and human embryonic stem cells.

ATCC® CELL CULTURE REAGENTS

ATCC-TESTED MEDIA SUPPLEMENTS AND SUBCULTURE REAGENTS - ADDITIONAL TOOLS FOR YOUR SUCCESS

Media supplements, antibiotics and reagents from ATCC allow you to customize the growth, maintenance and expansion of your cells. Backed by the same commitment to quality, each supplement, antibiotic and reagent from ATCC is tested for sterility and efficacy.

SUPPLEMENTS AND ANTIBIOTICS PRODUCT LIST

Product Name	ATCC [®] No.	Volume
ITS Solution (Insulin, Transferrin, Selenious Acid)	30-2606	10 mL
L-Glutamine Solution	30-2214	100 mL
L-Alanyl-L-Glutamine Solution	30-2115	100 mL
MEM Non-Essential Amino Acid Solution*	30-2116	100 mL
Gentamicin-Amphotericin B Solution	PCS-999-025	1.0 mL
Penicillin-Streptomycin-Amphotericin B Solution	PCS-999-002	1.0 mL
Penicillin-Streptomycin-Glutamine Solution	30-2220	100 mL
Penicillin-Streptomycin Solution	30-2300	100 mL

BUFFERS, STAINS AND DISSOCIATION REAGENTS PRODUCT LIST

Product Name	ATCC® No.	Volume
Non-Enzymatic Cell Dissociation Solution	30-2103	100 mL
Soybean Trypsin Inhibitor	30-2104	20 mL
0.25% Trypsin/0.53 mM EDTA Solution	30-2101	100 mL
Trypsin-EDTA for Primary Cells*	PCS-999-003	100 mL
Trypsin Neutralizing Solution	PCS-999-004	100 mL
Dulbecco's Phosphate Buffered Saline (DPBS)*	30-2200	500 mL
Hank's Balanced Salt Solution (HBSS)*	30-2213	500 mL
Phosphate Buffered Saline (PBS)*	SCRR-2201	500 mL
Erythrosin B Stain Solution	30-2404	40 mL
Phenol Red	PCS-999-001	1.0 mL
Water, Cell Culture Grade	30-2205	500 mL

CRYOPRESERVATION REAGENTS PRODUCT LIST

Product Name	ATCC® No.	Volume
Dimethylsulfoxide (DMSO)	4-X	5 x 5 mL
Serum-Free Cell Freezing Medium	30-2600	20 mL

SUPPLEMENTS AND ANTIBIOTICS PRODUCT LIST

Product Name	ATCC® No.	Volume
0.1% Gelatin Solution	PCS-999-027	100 mL

^{*} Formulations available online.

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.

Tip #1: 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).

Tip #2: 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.

Tip #3: Exercise patience. Cell lines react differently to cryopreservation and may require a few days in culture before they attach and grow.

Tip #4: 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 CO₂ 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% CO₂.

Tip #5: 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 more information.

If you have questions, we have answers! The ATCC FAQ center is a self-learning knowledge base containing a broad range of answers to intricate questions about our products and services. The FAQ center includes a practical interface allowing users to create their own personal profiles and contact ATCC **Technical Services directly for** additional support. Visit us online at www.atcc.org and click on the "FAQ" link at the bottom of any page.

"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

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