



ATCC® STEM CELL SOLUTIONS

COMPLETE CELL CULTURING SOLUTIONS FOR IPS AND ES CELLS

As one of the earliest licensees of iPS Academia Japan's induced pluripotent stem (iPS) cell patent portfolio, ATCC brings to the research community complete cell culturing solutions for iPS cells. Each lot of cells is performance tested for viability, pluripotency, differentiation capacity, karyotype, growth potential and sample purity. All ATCC® iPS cells are pre-adapted to an optimized serum-free, feeder-free cell culture environment and licensed for research use.

HUMAN iPS CELLS

High viability, low passage iPS cells are pre-adapted to serum-free, xeno-free and feeder-free culture conditions.

ATCC® No.	Designation	Reprogramming Method	Tissue of Origin	Disease	Gender	Race	Age
ACS-1003™	ATCC-DYP0730	Episomal	Foreskin	Down syndrome	Male	Caucasian	Unknown
ACS-1004™	ATCC-DYP0250	Episomal	Skin	Cystic fibrosis; homozygous for the Delta 508 mutation in the CFTR gene	Male	Unknown	16 years
ACS-1007™	ATCC-HYR0103	Retroviral	Liver	Normal	Male	Hispanic	31 years
ACS-1011™	ATCC-DYR0100	Retroviral	Foreskin	Normal	Male	Unknown	Newborn
ACS-1012™	ATCC-DYR0530	Retroviral	Skin	Parkinson's disease, asthma, depression	Male	Caucasian	63 years
ACS-1013™	ATCC-DYS0530	Sendai viral	Skin	Parkinson's disease, asthma, depression	Male	Caucasian	63 years
ACS-1014™	ATCC-DYP0530	Episomal	Skin	Parkinson's disease, asthma, depression	Male	Caucasian	63 years
ACS-1019™	ATCC-DYS0100	Sendai viral	Foreskin	Normal	Male	Unknown	Newborn
ACS-1020™	ATCC-HYS0103	Sendai viral	Liver	Normal	Male	Hispanic	31 years
ACS-1021™	ATCC-CYS0105	Sendai viral	Heart	Normal	Male	Unknown	72 years

Cells are tested for post-freeze viability and growth, sterility (including mycoplasma), identity by STR analysis and karyotype by G-banding. Each lot is tested for pluripotency using flow cytometry for the expression of the pluripotent markers. Differentiation potential is tested by embryoid body (EB) formation and subsequent analysis for the three germ layers by qRT-PCR. The number of colonies per vial is >30 colonies after 5 days when seeded as directed.

HUMAN ES CELLS

Human ES cells from ATCC are eligible for federal funding.

ATCC® No.	Name	Source	Cytogenetic Analysis	Age	Applications
SCRC-2002™	hESC BG01V	BG01V was derived from the wild-type, parental hESC line BG01 [PMID 12968106, PMID 15153607]	49,XXY, +12, +17	Embryo, blastocyst	Use as a control line -to study development of disease and differentiation

ATCC supports all of the cell culture systems used for the growth and expansion of undifferentiated iPS and ES cells—all the reagents needed are available in our offering.

STARTER KITS FOR IPS CELL CULTURE

Just getting started? ATCC provides pre-configured kits that make it easy and cost effective to get started with human pluripotent stem cell culture.

ATCC® No.	Name	Description
ACS-3044-K	Feeder-Free, Serum-Free Culture System	This kit supplies CellMatrix™ Basement Membrane Gel and cell culture components to support a serum-free, feeder-free cell culture environment, including Pluripotent Stem Cell SFM XF/FF, Stem Cell Dissociation Reagent, ROCK Inhibitor Y27632, Stem Cell Freezing Media, DMEM: F12 Medium and D-PBS.
ACS-3043-K	Feeder-Dependent, Serum-Free Culture System (MEF)	This kit supplies ready-to-plate irradiated CF-1 mouse embryonic fibroblasts (MEF) as the feeder cell layer and cell culture components including Pluripotent Stem Cell SFM XF, Stem Cell Dissociation Reagent, ROCK Inhibitor Y27632, Stem Cell Freezing Media, DMEM: F12 Medium and D-PBS.
ACS-3042-K	Feeder-Dependent, Serum-Free Culture System (HFF)	This kit supplies ready-to-plate irradiated HFF-1 human foreskin fibroblasts (HFF) as the feeder cell layer and cell culture components including Pluripotent Stem Cell SFM XF, Stem Cell Dissociation Reagent, ROCK Inhibitor Y27632, Stem Cell Freezing Media, DMEM: F12 Medium and D-PBS.
ACS-3041-K	Feeder-Dependent, Serum Culture System (MEF)	This kit supplies ready-to-plate irradiated CF-1 mouse embryonic fibroblasts (MEF) as the feeder cell layer and medium components including DMEM: F12 Medium, ES-Qualified FBS, L-Alanyl-L-Glutamine, MEM Nonessential Amino Acid Solution and rh bFGF.
ACS-3040-K	Feeder-Dependent, Serum Culture System (HFF)	This kit supplies ready-to-plate irradiated HFF-1 human foreskin fibroblasts (HFF) as the feeder cell layer and medium components including DMEM: F12 Medium, ES-Qualified FBS, L-Alanyl-L-Glutamine, MEM Nonessential Amino Acid Solution and rh bFGF.

SERUM-FREE, FEEDER-FREE CELL CULTURE SYSTEM, INDIVIDUAL REAGENTS

ACS-3002	Pluripotent Stem Cell SFM XF/FF	A defined, xeno-free, serum-free medium optimized for feeder-free culture of human pluripotent stem cells. The product consists of a basal medium with a separate growth supplement that is added prior to use.
ACS-3035	CellMatrix Basement Membrane Gel	A soluble, growth factor reduced basement membrane extract that supplies a feeder-free surface for the attachment of human pluripotent stem cells.
ACS-3010	Stem Cell Dissociation Reagent	A neutral protease isolated from <i>Bacillus polymyxa</i> that promotes safe and efficient detachment of human pluripotent stem cells during sub cultivation in cell culture.
ACS-3030	ROCK Inhibitor Y27632	ROCK Inhibitor prevents dissociation-induced apoptosis of human pluripotent stem cells increasing the survival rate and maintaining pluripotency during sub-cultivation and thawing as well as enhancing the survival rate of stem cells during cryopreservation.
30-2200	Dulbecco's Phosphate Buffered Saline	D-PBS without calcium chloride or magnesium chloride

SERUM-FREE, FEEDER-DEPENDENT CELL CULTURE SYSTEM, INDIVIDUAL REAGENTS

ACS-3001	Pluripotent Stem Cell SFM XF	A serum-free, xeno-free, defined medium optimized for feeder-dependent culture of human pluripotent stem cells.
ACS-3010	Stem Cell Dissociation Reagent	A neutral protease isolated from <i>Bacillus polymyxa</i> that promotes safe and efficient detachment of human pluripotent stem cells during sub cultivation in cell culture.
ACS-3030	ROCK Inhibitor Y27632	ROCK Inhibitor prevents dissociation-induced apoptosis of human pluripotent stem cells increasing the survival rate and maintaining pluripotency during sub-cultivation and thawing as well as enhancing the survival rate of stem cells during cryopreservation.
30-2200	Dulbecco's Phosphate Buffered Saline	D-PBS without calcium chloride or magnesium chloride.
SCRC-1040.1™	MEF (CF-1) IRR	Irradiated mouse embryonic fibroblast
SCRC-1041.1™	HFF-1 IRR	Irradiated human fibroblast

FEEDER-DEPENDENT WITH SERUM CELL CULTURE SYSTEM, INDIVIDUAL REAGENTS

30-2006	DMEM: F12 Medium	1:1 mix of Dulbecco's Medium and Ham's F-12 Medium. Modified to contain 2.5 mM L-glutamine, 15 mM HEPES, 0.5 mM sodium pyruvate, and 1200 mg/L sodium bicarbonate.
30-2115	L-Alanyl-L-Glutamine	200 mM Solution in 0.85% NaCl
30-2116	MEM Nonessential Amino Acid Solution	100x
30-2200	Dulbecco's Phosphate Buffered Saline	D-PBS without calcium chloride or magnesium chloride.
SCRR-30-2020	ES-Qualified FBS	This serum is tested for ability to support embryonic stem culture and differentiation. Plating efficiency, colony morphology, and the expression of at least five markers of differentiation are determined for undifferentiated cells and cells induced to EB formation through full differentiation.
ACS-3025	rh bFGF	Recombinant Human Basic Fibroblast Growth Factor facilitates the long-term growth of pluripotent stem cells while maintaining pluripotency.
ACS-3010	Stem Cell Dissociation Reagent	A neutral protease isolated from <i>Bacillus polymyxa</i> that promotes safe and efficient detachment of human pluripotent stem cells during sub cultivation in cell culture.
ACS-3030	ROCK Inhibitor Y27632	ROCK Inhibitor prevents dissociation-induced apoptosis of human pluripotent stem cells increasing the survival rate and maintaining pluripotency during sub cultivation and thawing as well as enhancing the survival rate of stem cells during cryopreservation.

ATCC® No.	Name	Description
SCRC-1040.1	MEF (CF-1) IRR	Irradiated mouse embryonic fibroblast.
SCRC-1041.1	HFF-1 IRR	Irradiated human fibroblast

Pluripotent Stem Cell Qualified Feeder Layer Cells and Reagents

Feeder cell lines including antibiotic-resistant lines are validated on multiple stem cell lines for safe and robust stem cell culture. In addition to a wide selection of standard feeder cell lines, mitotically inactivated feeder cell lines are available for your convenience.

ATCC® No.	Name	Description
CRL-2581™	C166	Mouse embryonic endothelial cell
CRL-2582™	C166-GFP	Mouse embryonic endothelial cell with GFP expression
CRL-2749™	OP9	Mouse embryonic bone marrow stromal cells
SCRC-1007™	AFT024	Mouse embryonic liver fibroblast
SCRC-1007.1™	AFT024 IRR	Irradiated mouse embryonic liver fibroblast
SCRC-1008™	MEF (C57BL/6)[MEF-BL/6-1]	Mouse embryonic fibroblast
SCRC-1008.1™	MEF (C57BL/6) IRR	Irradiated mouse embryonic fibroblast
SCRC-1008.2™	MEF (C57BL/6) MITC	Mitomycin C treated mouse embryonic fibroblast
SCRC-1040™	MEF (CF-1)	Mouse embryonic fibroblast
SCRC-1040.1™	MEF (CF-1)IRR	Irradiated mouse embryonic fibroblast
SCRC-1040.2a™	MEF (CF-1) MITC	Mitomycin C treated mouse embryonic fibroblast
SCRC-1045™	MEF (DR4)	Multi-drug resistant mouse fibroblast
SCRC-1045™	MEF (DR4)	Multi-drug resistant mouse fibroblast
SCRC-1041™	HFF-1	Human foreskin fibroblast
SCRC-1041.1™	HFF-1 IRR	Irradiated human foreskin fibroblast
PCS-201-011	Dermal Fibroblasts; Normal, Human	Mitomycin C treated neonatal human fibroblast
SCRC-1041.2™	HFF-1 MITC	Mitomycin C treated human foreskin fibroblast
SCRC-1049™	SNL76/7	Mouse STO fibroblast with G418 resistance and endogenous expression of LIF
SCRC-1050™	SNL76/7-4	Mouse STO fibroblast with resistance to G418 and puromycin plus endogenous expression of LIF
SCRR-3020™	Mitomycin C	Antineoplastic antibiotic to prepare inactivated feeder cells

COMPLETE CELL CULTURING SOLUTIONS FOR MOUSE EMBRYONIC STEM CELLS

Mouse ES Cells

ATCC has many of the most influential and widely cited mouse ES cell lines.

ATCC® No.	Name	Description
CRL-1934™	ES-D3(D3)	Derived from strain 129S2/SvPas mouse blastocyst
SCRC-1002™	ES-C57BL/6	Derived from strain C57BL/6J (B6) mouse blastocyst
SCRC-1010™	J1	Derived from a male agouti 129S4/Svjae embryo; useful in studies on embryonic development and Cre-Lox recombination
SCRC-1011™	R1	Established from a 3.5 day blastocyst produced by crossing two 129 mouse sub strains (129S1/SvImJ and 129X1/Svj)
SCRC-1016™	ESF 158	Developed from (NOD×129) F1 × 129 backcross 1 mice, intercrossed to select for homozygous regions containing disease loci; useful for genetic targeting of the non-obese diabetic (NOD) mouse genome
SCRC-1018™	RW.4	Derived from a strain 129X1/Svj mouse blastocyst; useful for gene knock-out/knock-in and studies related to differentiation and ESC proliferation
SCRC-1019™	B6/BLU	Derived from a C57BL/6 transgenic line containing a LacZ reporter; the transgene is a beta-globin LacZ fusion
SCRC-1020™	SCC#10	Derived from a strain 129Sv/J (129X1Sv/J) mouse blastocyst; useful for gene knock-out/knock-in
SCRC-1021™	EDJ#22	Derived from 129SvEV mice from Taconic; useful in gene targeting experiments
SCRC-1023™	AB2.2	Originated from a Steel sub strain of 129 mice (129/SvEvBrd-Hprt ^b -m2); useful in recombineering with a unique, fully end-sequenced, 129Sv BAC library generated from AB2.2 ES cell DNA
SCRC-1033™	7AC5/EYFP	A yellow fluorescent variant of R1 ES cells (129S1/SvImJ and 129X1/Svj) generated by the random integration of EYFP using co-electroporation with a circular selectable marker containing vector pPGK-Puro
SCRC-1036™	R1/E	Subcloned from R1 ES cells (129S1/SvImJ and 129X1/Svj)
SCRC-1037™	G-Olig2	Strain 129X1/Svj ES line designed by the insertion of green fluorescent protein (GFP) into the gene for Olig2; the insertion permits visualization and physical separation of a subset of living ES-cell-derived neural cells

ATCC® No.	Name	Description
SCRC-1038™	CE-1	Derived from the D3 ES line; CE1 (for Cassette Exchange) contains one 'acceptor' module that allows for efficient double lox targeting (the cells are hygromycin resistant)
SCRC-1039™	CE3	Derived from D3 ES line; CE3 (for Cassette Exchange) contains one 'acceptor' module that allows for efficient double lox targeting with constitutive GFP expression (the cells are puromycin resistant)

Mouse ES Cell Culture Systems and Reagents

Performance validated and formulated to meet the exacting specifications that mouse ES cells require for rapid proliferation, good morphology and maintenance of pluripotency. We have a full complement of media, sera, cell culture reagents, and the most extensive offering of feeder layer cell lines available.

ATCC® No.	Name	Description
SCRR-2011	Mouse ES Cell Basal Medium	Optimized to support the undifferentiated self-renewal cycle related to mouse embryonic stem cell growth. Contains a stable glutamine dipeptide, may be supplemented by addition of ES-Cell Qualified Fetal Bovine Serum
SCRR-2201	Fetal Bovine Serum ES cell qualified	Tested for ability to support embryonic stem cell culture and differentiation. Plating efficiency, colony morphology, and the expression of at least five markers of differentiation

COMPLETE CELL CULTURING SOLUTIONS FOR HUMAN MESENCHYMAL STEM CELLS

Applications: Adult stem cell differentiation, regenerative medicine, cell therapy, tissue engineering, creation of iPS cell lines.

Human Mesenchymal Stem Cells (MSC)

ATCC® No.	Name	Organism	Source	Growth Properties	Age	Ethnicity/Gender	Passage #
PCS-500-010	Umbilical Cord-Derived Mesenchymal Stem Cells; Normal, Human	Homo sapiens (human)	Umbilical cord matrix (Wharton's Jelly)	Adherent	Neonatal	Lot Specific	2
PCS-500-011	Adipose-Derived Mesenchymal Stem Cells; Normal, Human	Homo sapiens (human)	Lipoaspirate	Adherent	Adult	Lot Specific	2

Human MSC Culture Systems and Reagents

Mesenchymal Stem Cell Basal Medium, when supplemented with Mesenchymal Stem Cell Growth Kit—Low serum components, provides an ideal cell system to propagate mesenchymal stem cells in low serum (2% FBS) conditions. When maintained under optimal growth conditions, ATCC Normal Human Adipose-Derived Mesenchymal Stem Cells have been shown to be multipotent, capable of differentiating down the adipogenic, osteogenic and chondrogenic lineages.

ATCC® No.	Name	Description
PCS-500-030	Mesenchymal Stem Cell Basal Medium	Designed to support MSCs derived from human lipoaspirates, bone marrow and umbilical cord. MSC Basal Medium must be supplemented with the appropriate cell-specific growth kit. No feeder layers or extracellular matrix required.
PCS-500-040	Mesenchymal Stem Cell Growth Kit - Low Serum	Contains components that, when added to MSC Basal Medium, create a complete cell culture environment for human MSCs.
PCS-500-050	Adipocyte Differentiation Toolkit	Contains medium and reagents designed to induce adipogenesis in Adipose-Derived MSCs with high efficiency; supports maturation of derived adipocytes during lipid accumulation.
PCS-500-051	Chondrocyte Differentiation Tool	Complete differentiation medium designed to induce chondrogenesis in actively proliferating Adipose-Derived MSCs with high efficiency.
PCS-500-052	Osteocyte Differentiation Tool	Complete differentiation medium designed to induce osteogenesis in actively proliferating Adipose-Derived MSCs with high efficiency.

See our online catalog at www.atcc.org for a full description of each item.

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