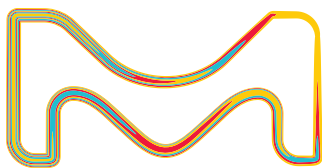
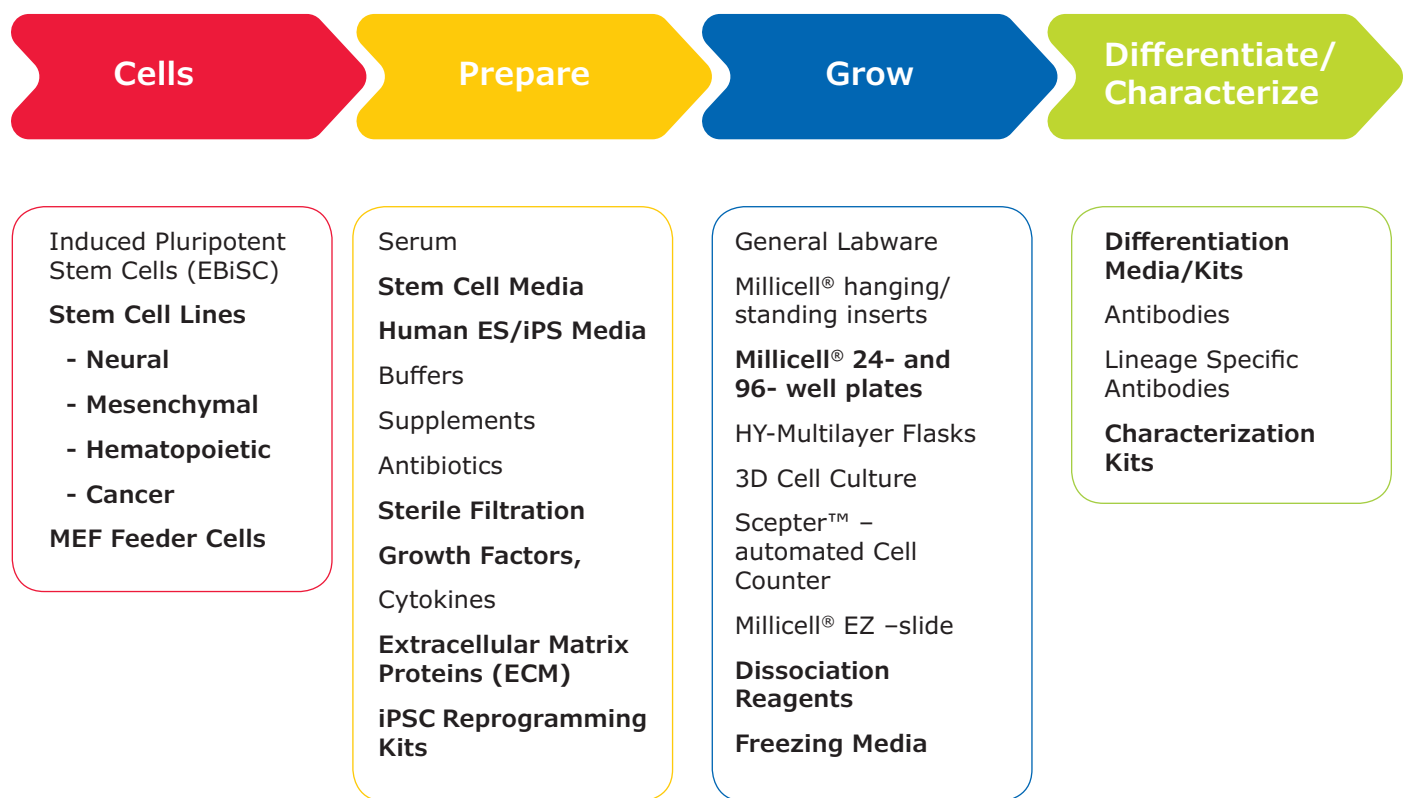


Stem Cell Culture



The life science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Cells

Choose from a broad range of cell lines, primary cells or stem cells.

Description	Catalogue No.
ReNcell CX Human Neural Progenitor Cell Line	SCC007
ReNcell VM Human Neural Progenitor Cell Line	SCC008
Human iPSC Derived Neural Progenitors	SCC035
Human Oligodendrocyte Progenitor Cells (OPCs)	SCR600
Adult Rat Hippocampal Neural Stem Cells	SCR022
Mouse Spinal Cord Neural Stem Cells	SCR031
THP 1, human monocytic leukaemia cells	88081201
CACO-2 colorectal adenocarcinoma	86010202
MCF7 breast cancer	86012803
WI 38 human lung fibroblast cell line	85062512
BEAS-2B human bronchial epithelium	95102433
Nthy-Ori 3-1 human thyroid cell line	90011609
SH-SY5Y human neuroblastoma	94030304
1321N1 human astrocytoma	86030402
MRC-5 PD19 cell line	5072101
Vero cell line	84113001
EmbryoMaxR Primary Mouse Embryo Fibroblasts, Strain CF1, Mytomycin C Treated	PMEF-CF
EmbryoMaxR Primary Mouse Embryo Fibroblasts, Neo Resistant, Strain FVB	PMEF-N

European Bank of Induced Pluripotent Stem Cells (EBiSC)

New Global Access to Fully Characterized Human iPSC Lines

We are proud to offer the European Bank of Induced Pluripotent Stem Cells (EBiSC) to provide researchers with greater access to nearly 800 patient-derived human iPS cell lines for disease modeling. This portfolio is an extension of our partnership with Public Health England as a distributor of its European Collection of Authenticated Cell Cultures (ECACC) portfolio. We offer a complete solution for the iPSC workflow, including novel reprogramming kits, iPSC culture media, and stem cell antibodies and characterization kits.

Benefits of the EBiSC collection include:

- Generated from a wide range of donors with specific disease backgrounds including: Parkinson's, Alzheimer's, Huntington's, ALS, macular degeneration, bipolar disorder, diabetes, cardiovascular diseases and CRISPR Gene edited control lines.

- Extensively characterized and genotyped
- Robust and reliable supply chain and product ordering
[SigmaAldrich.com/ebisc](https://www.sigmaaldrich.com/ebisc)



We have a complete solution for the iPSC workflow, including iPS cell lines or novel reprogramming kits, iPSC culture media, and stem cell antibodies and characterization kits.

For more information, visit
[SigmaAldrich.com/stemcells](https://www.sigmaaldrich.com/stemcells)

Prepare

Prepare cell culture media with our sterile filters. With industry leading innovative designs for filtration devices and 60 years of membrane technology expertise, We offer a wide range of solutions to make the repetitive and critical tasks accurate, quick and easy.

Stericup® Quick Release Filter Units

The NEW Stericup® Quick Release Sterile Vacuum Filtration System offers the standard you trust in a new workflow-friendly design.

Description	Membrane/Application	Pore Size (µm)	Funnel Capacity (ml)	Receiver Bottle (ml)	Qty/Pk	Catalogue No.
Stericup®-GP Quick Release Filter Units Stem Cell Tested	Millipore Express® (PES)/ fast filtration of tissue culture media and buffers	0.22	250	250	12	S2GPU02RE
			500	500	12	S2GPU05RE
			1000	1000	12	S2GPU11RE
Stericup®-VP Quick Release Filter Units	Millipore Express® (PES)/ removal of mycoplasma	0.1	1000	1000	12	S2VPU11RE
Stericup®-GV Quick Release Filter Units	Durapore® (PVDF) / filtration of high value biomolecules, lowest protein binding	0,22	250	250	12	S2GVU02RE
			500	500	12	S2GVU05RE
			1000	1000	12	S2GVU11RE

Steriflip® Filter Units

For filtering 10 mL to 50 mL volumes without sample transfer steps.

Description	Membrane	Pore Size (µm)	Qty/Pk	Catalogue No.
Steriflip®-GP Filter Units	Millipore Express® (PES)	0.22	25	SCGP00525
Steriflip®-GV Filter Units	Durapore® (PVDF)/filtration of high value biomolecules, lowest protein binding	0,22	25	SE1M179M6

Millex® Syringe Filters

Sterilized and individually packaged.

Description	Pore Size (µm)	Type	Process Volume	Hold-up Volume (after air purge)	Qty/Pk	Catalogue No.
Millex® 33 mm Millipore Express® (PES)/ Fast Flow and low protein binding	0,22	GP	200	< 100 µl	50	SLGP033RS
					250	SLGP033RB
Millex® 33 mm Durapore® (PVDF)/Lowest binding membrane for protein rich solutions	0,1	VV	100ml	<100 µl	50	SLVV033RS
	0,22	GV	100ml	<100 µl	50	SLGV033RS
					250	SLGV033RB

Growth Factors:

We offer a comprehensive range of growth factors for use in human, mouse, and rat cell culture, stem cell differentiation and ELISA studies.

Description	Catalogue No.
Fibroblast Growth Factor basic, human animal-free recombinant	GF003-AF
BMP-4 human Animal-component free, recombinant, expressed in E. coli, ≥98% (SDS-PAGE), ≥98% (HPLC)	SRP3260
EGF, human recombinant animal-free	GF316
Platelet-Derived Growth Factor-AA human PDGF-AA, recombinant,	P3076
TNF alpha, human recombinant animal-free	GF314
TNF alpha, human recombinant	GF023

ECM Proteins:

From the most commonly used proteins to more specialized matrices, we have the substrate you need.

Description	Catalogue No.
NEW Stem Cell Qualified ECM Gel for human ES and iPS cell culture	CC131-5ML
Fibronectin Purified Protein from Human Plasma	FC010
Fibronectin from bovine plasma	F1141-5MG
Poly-D-Lysine Solution, 1 mg/ml	A-003-E
Poly-D-lysine hydrobromide	P6407-5MG
Laminin. Mouse purified	CC095
Laminin from Engelbreth-Holm-Swarm murine sarcoma basement membrane	L2020-1MG
Collagen Type 1, rat tail	08-115
Poly-L-ornithine solution	P4957-50ML

Stem Cell Media:

Establishing a successful culture begins with preparing cells and media with high quality

Description	Catalogue No.
Neural Stem Cell Basal Medium	SCM003
NDiff Neuro-2 Medium Supplement (200x)	SCM012
NDiff Neuro-27 Medium Supplement (100x)	SCM013
N21 Medium Supplement (50X)	SCM081
PLTMax Human Platelet Lysate, 100ml	SCM141
PLTGold Human Platelet Lysate (Heparin-Free), 100ml	SCM151
Human Mesenchymal-Xeno Free Expansion Medium	SCM045
Stemline® Mesenchymal Stem Cell Expansion Medium	S1569-1L
PluriSTEM™ Human ES/iPS Medium	SCM130
PluriSTEM-XF™ Human ES/iPS Medium	SCM132
Stemline® II Hematopoietic Stem Cell Expansion Medium	S0192
3dGRO™ Spheroid Medium for cancer stem cells	S3077

iPSC Reprogramming Kits

Lentiviral iPS Reprogramming Kits

The STEMCCA™ lentivirus reprogramming kits make it easier than ever to obtain and work with induced pluripotent stem (iPS) cells even with the most difficult to reprogram cells such as PBMCs. Unlike traditional iPS cell generation which requires simultaneous co-infection by four separate expression vectors, the STEMCCA kits use a single polycistronic lentiviral vector to improve efficiency and reduce the number of viral integrations.

Description	Catalogue No.
Human STEMCCA Constitutive Polycistronic (OKSM) Lentivirus Reprogramming Kit - available through Merck Millipore	SCR544
Human iPS Reprogramming Boost Supplement I	SCR088
Human iPS Reprogramming Boost Supplement II	SCR094
Mouse iPS Reprogramming Boost Supplement	SCR087

Virus-Free iPS Reprogramming Kits

The Simplicon™ RNA Reprogramming Technology utilizes a single polycistronic self-replicating RNA strand that is sufficient for generating high numbers of human iPSCs using a single transfection step. The single RNA contains the four reprogramming factors, OCT-4, KLF-4, SOX-2 and GLIS1, and allows for efficient reprogramming without viral intermediates or host genome integration.

Description	Catalogue No.
Simplicon™ RNA Reprogramming Kit (OKSG)	SCR550
Simplicon™ OKSG-cMyc RNA (OKSGM)	SCR703
Human OKSG-cMyc TagRFP Simplicon RNA	SCR714

The Simplicon™ RNA Reprogramming Technology is a next generation reprogramming system that uses a single synthetic, polycistronic self-replicating RNA strand engineered to mimic cellular RNA to generate human iPS cells. The single RNA strand contains the four reprogramming factors, OCT-4, KLF-4, SOX-2 and GLIS1, and enables extremely efficient reprogramming using a single transfection step without any viral intermediates or host genome integration. Once iPSCs are generated, the RNA can easily be selectively eliminated by removing the interferon-gamma (IFNγ) inhibitor, B18R, from the cell culture medium.

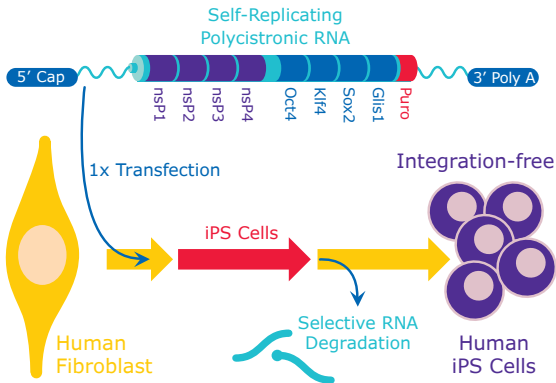


Figure 1. Human iPS cells can be generated with a single transfection of polycistronic RNA. Once created, the reprogramming RNA can be selectively degraded by removing B18R from the culture media, creating transgene-free, replicon-free iPSCs.

Grow

Millicell® Standing and hanging Inserts
for microporous membrane-based cell culture

Millicell® - 24 Well Cell Culture Insert Plates



Description	System Components	Membrane Pore Size	Qty/Pk	Catalogue No.
Millicell®-24 cell culture insert plates	24-well cell culture plate, single-well feeder tray, 24-well receiver tray and lid	PCF (0,4 µm)	1	PSHT010R1
		PET (1,0 µm)	1	PSRP010R1
		PCF (3 µm)	1	PSST010R1

Choose from a broad range of **dissociation reagents** like

Description	Catalogue No.
Accutase	A6964-100ML
Trypsin solution from porcine pancreas	T4674-100ML
NEW StableCell™ Trypsin Solution, 1x	T2601
NEW EZ-LIFT™ Stem Cell Passaging Reagent, passages only undifferentiated cells	SCM139-100ML

Cell Freezing:

Protect your cells from damaging ice crystal formation during freezing by using our application-tested cryoprotectants and ready-to-use media.

Description	Catalogue No.
Dimethyl sulfoxide, sterile filtered	D2438-50ML
PluriSTEM-XF™ Freeze Medium for human ES/iPS cells	5CM135
CryoStor® cell cryopreservation media	C2874-100ML
Neural Stem Cell Freezing Medium (1X)	SCM014
Mesenchymal Stem Cell Freezing Medium (1x)	SCM016
CoolCell® LX, purple Cell Freezing Container, for 12 × 1mL or 2mL cryogenic vials	CLS432001
CoolCell® 5mL LX, purple Cell Freezing Container, for 12 × 3.5mL to 5mL cryogenic vials, purple	CLS432005
CoolCell® FTS30, purple Freezing container, for 30 × 1mL or 2mL cryogenic vials	CLS432006
CoolCell®SV2 Freezing Container, for 12 x 2mL serum vials	CLS432010
Cryogenic vial grippers, pack of 5, assorted colors	CLS432136
Corning® cryogenic vials, external thread	CLS430659

CORNING



Differentiate/ Characterize

Differentiation Medium and Kits

Description	Catalogue No.
Human ES/iPS Neurogenesis Kit	SCR603
OsteoMAX-XF™ Osteocyte Differentiation Medium;	SCM121
AdipoMAX Adipocyte Differentiation Medium	SCM122
ChondroMAX Chondrocyte Differentiation Medium	SCM123

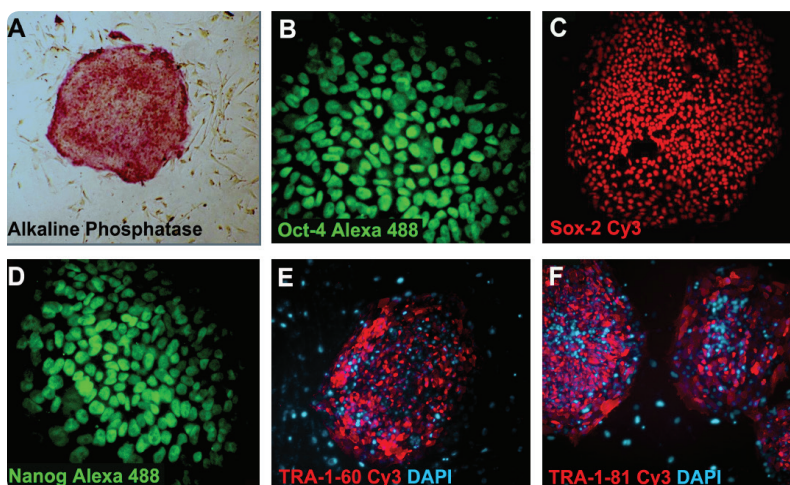
Characterization Kits

Description	Catalogue No.
ES Cell Characterization Kit	SCR001
Fluorescent Human ES/iPS Cell Characterization Kit	SCR078
Cardiomyocyte Characterization Kit	SCR059
Endothelial Cell Characterization Kit	SCR023
Human Neural Stem Cell Characterization Kit	SCR060
Human Oligodendrocyte Characterization Kit	SCR601
Human Mesenchymal Stem Cell Characterization Kit	SCR067
AldeRed ALDH Detection Assay, enables live cancer stem cell identification and isolation	SCR150

Pluripotent Stem Cell Markers

Pluripotent Stem Cell Antibodies
Browse our extensive selection of human pluripotent stem cell specific antibodies including OCT-4, Nanog, SOX-2, Lin-28, TRA-1-60, TRA-1-81, SSEA-1, SSEA-3, SSEA-4, Human Nuclei and many others.

Pluripotent hES/iPS cells express pluripotent markers, alkaline phosphatase (40x) (A), Oct-4 Alexa 488 (400x) (B), Sox-2 Cy3 (100x) (C), Nanog Alexa 488 (400x) (D), TRA-1-60 Cy3 (100x) (E), and TRA-1-81-Cy3 (100x) (F)



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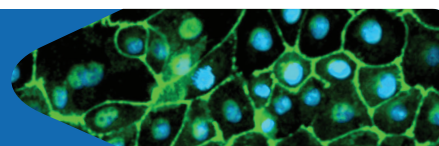
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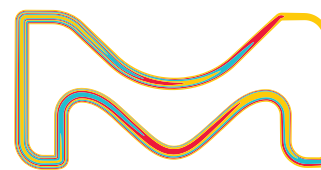
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