



# Cell and Gene Therapy Solutions

Research | Clinical Trials | Scale-Up | cGMP Production

Cell and gene therapies represent groundbreaking approaches in medicine. They are revolutionary, creating treatment options for previously incurable diseases and providing individualized and long-lasting therapeutic benefits.

These techniques target the root cause of genetic conditions and offer a personalized approach to medicine, singling out specific cells or genes in complex conditions like cancer, neurodegenerative disorders, and cardiovascular diseases. They may provide long-lasting or even permanent effects and have the potential to enhance regeneration, restoration, or replacement of damaged or dysfunctional tissues and organs.

Find product solutions for every step of your workflow to help bring treatments to patients faster.

# Cell Isolation

Transform your heterogenous apheresis, cord blood, and tissue samples into a population of lymphoid or myeloid cells, NK cells, dendritic cells, pluripotent stem cells, and hematopoietic stem cells.



Cat. No.	Description	Quantity
<b>RUO Magnetic Beads</b>		
80101G		0.5 mL
80102G	Invitrogen™ DynaGreen™ Protein A Magnetic Beads	3 mL
80103G		25 mL
80104G		0.5 mL
80105G	Invitrogen™ DynaGreen™ Protein A/G Magnetic Beads	3 mL
80106G		25 mL
11-131D	Gibco™ Dynabeads™ Human T-Activator CD3/CD28 for T Cell Expansion and Activation	2 mL
11-452D	Gibco™ Dynabeads™ Mouse T-Activator CD3/CD28 for T-Cell Expansion and Activation	2 mL
11-151D	Invitrogen™ Dynabeads™ CD3	5 mL
12-321D	Invitrogen™ DynaMag™-2 Magnet	Each
12-331D	Invitrogen™ DynaMag™-96 Side Magnet	Each
<b>Cell Lines</b>		
A15652	Gibco™ StemPro™ BM Mesenchymal Stem Cells	1 × 10 <sup>6</sup> Viable Cells/Vial
R7788115	Gibco™ StemPro™ Human Adipose-Derived Stem Cells	1 × 10 <sup>6</sup> Viable Cells/Vial
Cat. No.	Description	Quantity
<b>CTS Media and Reagents</b>		

12-618-013	Gibco™ CTS™ KnockOut™ SR XenoFree Medium	500 mL
A1285901	Gibco™ CTS™ TrypLE™ Select Enzyme (1X)	100 mL
A4239101	Gibco™ CTS™ Versene™ Solution	100 mL

### RUO Media and Reagents

10-639-011	Gibco™ StemPro™-34 SFM (1X)	500 mL
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# Cell Engineering

Find reagents and kits to perform TALEN and CRISPR-Cas9 procedures, lentiviral and nonviral gene delivery methods, and other applications to specifically and effectively modify your cells and cell lines.

Cell engineering techniques include:

- Transcription activator-like effector nuclease (TALEN)
- Clustered regularly interspaced short palindromic repeat (CRISPR)-associated protein 9 (CRISPR-Cas9)
- Lentiviral production solutions
- Nonviral gene delivery



Cat. No.	Description	Quantity
<b>CTS Transfection Reagents and Kits</b>		
A4132601	Gibco™ CTS™ LV-MAX™ Transfection Kit	Each
A4124001	Gibco™ CTS™ LV-MAX™ Production Medium	1 L
A34546	Gibco™ CTS™ CytoTune™-iPS 2.1 Sendai Reprogramming Kit	Each
A4124801	Gibco™ CTS™ Opti-MEM™ I Medium	100 mL
A45220	Gibco™ CTS™ TrueCut™ Cas9 Protein	2.5 mg
<b>RUO Transfection Reagents and Kits</b>		
NEON1SK	Invitrogen™ Neon™ NxT Electroporation System Starter Pack	Each
STEM00001	Invitrogen™ Lipofectamine™ Stem Transfection Reagent	0.1 mL



Cat. No.	Description	Quantity
<b>RUO Transfection Reagents and Kits</b>		
LMRNA001	Invitrogen™ Lipofectamine™ MessengerMAX™ Transfection Reagent	0.1 mL
MIR6640*	Mirus Bio™ Lentivirus Packaging Mix Powered by MISSION™ Genomics	34 Reactions
MIR2305*	Mirus Bio™ TransIT™-LT1 Transfection Reagent	5 x 1 mL
MIR6755*	Mirus Bio™ VirusGEN™ AAV Transfection Kit	150 mL
MIR8007*	Mirus Bio™ VirusGEN™ AAV Transfection Kit with RevIT AAV Enhancer	Each
MIR51000*	Mirus Bio™ Ingenio™ EZporator™ Electroporation System	Each
PRE2311	Promega FuGENE™ HD Transfection Reagent	1 mL
PRE2692	Promega FuGENE™ 6 Transfection Reagent	5 x 1 mL

\*Available in the U.S. only.

## Cell Expansion

Choose specialized culture media, sera, and other supplements to help support the growth, expansion, and maintenance of your cells and cell lines.



Cat. No.	Description	Quantity
<b>Fetal Bovine Serum (FBS)</b>		
MT35010CV	Corning™ Regular Fetal Bovine Serum	500 mL
MT35011CV	Corning™ Regular Fetal Bovine Serum, Heat Inactivated	500 mL
MT35015CV	Corning™ Premium Fetal Bovine Serum	500 mL
MT35016CV	Corning™ Premium Fetal Bovine Serum, Heat Inactivated	500 mL
MT35070CV	Corning™ Premium Fetal Bovine Serum, Gamma Irradiated	500 mL
MT35072CV	Corning™ Premium Fetal Bovine Serum, Charcoal Stripped	500 mL

Cat. No.	Description	Quantity
MT35075CV	Corning™ Premium Fetal Bovine Serum, Tetracycline Negative	500 mL
MT35096CV	Corning™ Fetal Bovine Serum, Gamma Irradiated (AU)	500 mL
SH3007103HI	Cytiva™ HyClone™ Characterized FBS (U.S.)	500 mL
SH3007003	Cytiva™ Hyclone™ Defined Fetal Bovine Serum (U.S.)	500 mL
SH3007103	Cytiva™ HyClone™ Characterized Fetal Bovine Serum (U.S.)	500 mL
SH3007103HI	Cytiva™ HyClone™ Characterized Fetal Bovine Serum (U.S.), Heat Inactivated	500 mL
SH3089803	Cytiva™ Fetal Bovine Serum (U.S.), Super-Low Ig	500 mL
A3840002	Gibco™ One Shot™ Fetal Bovine Serum (U.S.), Heat Inactivated	10 x 50 mL
09-291-6749	MP Biomedicals™ CELLelect™ Gold Fetal Bovine Serum	100 mL

#### CTS Cell Culture Media and Supplements

08-701-12DK	Gibco™ CTS™ AIM V™ Serum Free Media (SFM), Therapeutic Grade, with Antibiotics and Phenol Red	1 L
A3830801	Gibco™ CTS™ AIM-V™ Medium, without Antibiotics or Phenol Red	1 L
A1285601	Gibco™ CTS™ DPBS, without Calcium and Magnesium	1 L
A1285602	Gibco™ CTS™ DPBS, without Calcium and Magnesium	2 L
A1285801	Gibco™ CTS™ DPBS (1X), with Calcium and Magnesium	1 L
A4238501	Gibco™ CTS™ Essential 6 Medium	500 mL
A1286101	Gibco™ CTS™ KnockOut™ DMEM Medium	500 mL
A1370801	Gibco™ CTS™ KnockOut™ DMEM/F-12 Medium	500 mL
12-618-013	Gibco™ CTS™ KnockOut™ SR XenoFree Medium	500 mL
A1371201	Gibco™ CTS™ Neurobasal™ Medium	500 mL
A1371001	Gibco™ CTS™ Neurobasal™-A Medium	500 mL
A1048501	Gibco™ CTS™ OpTmizer™ T Cell Expansion SFM, Bottle	1 L



Cat. No.	Description	Quantity
A1048503	Gibco™ CTS™ OpTmizer™ T Cell Expansion SFM, Bag	1 L
A4702901	Gibco™ CTS™ Immune Cell Serum Replacement (SR)	250 mL
<b>CTS Cell Culture Media and Supplements</b>		
A1286001	Gibco™ CTS™ GlutaMAX™-I Supplement (100X)	100 mL
A4239101	Gibco™ CTS™ Versene™ Cell Dissociation Solution	100 mL
A1370701	Gibco™ CTS™ (Cell Therapy Systems) N-2 Supplement (100X)	5 mL
<b>RUO Cell Culture Media</b>		
MT10092CV	Corning™ Basal Cell Culture Liquid Media: 50/50 DMEM and Ham's F-12	6 x 500 mL
MT10013CM	Corning™ DMEM with L-Glutamine, 4.5 g/L Glucose and Sodium Pyruvate	6 x 1 L
MT10017CM	Corning™ DMEM with L-Glutamine and 4.5 g/L Glucose; Without Sodium Pyruvate	6 x 1 L
MT10040CV	Corning™ Modified RPMI 1640 Medium (1X), with L-Glutamine	6 x 500 mL
MT10040LX	Corning™ RPMI 1640 Liquid Media	10 L
SH3085003	Cytiva HyClone™ AdvanceSTEM™ Dulbecco's Phosphate Buffered Saline (1X), ES Cell Qualified	1 L
SH3022802	Cytiva HyClone™ Iscove's Modified Dulbecco's Medium (IMDM)	1 L
SH30243LS	Cytiva HyClone™ Dulbecco's Modified Eagles Medium	6 x 1 L
SH3002102	Cytiva HyClone™ Dulbecco's Low Glucose Modified Eagles Medium	1 L
SH30022LS	Cytiva HyClone™ Dulbecco's High Glucose Modified Eagles Medium	6 x 1,000 mL
SH3052601	Cytiva HyClone™ Ham's Nutrient Mixture F12 Media	500 mL
SH3002701	Cytiva HyClone™ RPMI 1640 Media	500 mL
SH3094102	Cytiva HyCell™ TransFxC™-C Media	1 L
A1014201	Gibco™ CELLstart™ Substrate, hESC-Qualified	2 mL
12-633-012	Gibco Advanced RPMI 1640 Medium (1X)	500 mL

Cat. No.	Description	Quantity
ICN1960454	MP Biomedicals™ Dulbecco's Phosphate Buffered Saline (10X)	500 mL
MP092640054	MP Biomedicals™ FastGro Synthetic FBS Replacement, Animal Free	500 mL
MP091260254	MP Biomedicals™ RPMI 1640 Medium	500 mL
<b>CTS Media and Supplements</b>		
08-701-12DK	Gibco™ CTS™ AIM V™ Serum Free Media (SFM), Therapeutic Grade, with Antibiotics and Phenol Red	1 L
A3830801	Gibco™ CTS™ AIM-V™ Medium, without Antibiotics or Phenol Red	1 L
A1286001	Gibco™ CTS™ GlutaMAX™-I Supplement (100X)	100 mL
A4238501	Gibco™ CTS™ Essential 6 Medium	500 mL
12-618-013	Gibco™ CTS™ KnockOut™ SR XenoFree Medium	500 mL
A4239101	Gibco™ CTS™ Versene™ Cell Dissociation Solution	100 mL
A1370701	Gibco™ CTS™ (Cell Therapy Systems) N-2 Supplement (100X)	5 mL
A1371201	Gibco™ CTS™ Neurobasal™ Medium	500 mL
A1371001	Gibco™ CTS™ Neurobasal™-A Medium	500 mL
<b>RUO Media and Supplements</b>		
A1067501	Gibco™ StemPro™ MSC SFM XenoFree Kit	Each
A1033201	Gibco™ StemPro™ MSC SFM	500 mL
12-746-012	Gibco™ MesenPRO RST™ Medium	500 mL
A3320201	Gibco™ CultureOne™ Supplement (100X)	5 mL
<b>Cell Differentiation Kits</b>		
A2921201	Gibco™ PSC Cardiomyocyte Differentiation Kit	Each
A3147701	Gibco™ PSC Dopaminergic Neuron Differentiation Kit	Each
A1007201	Gibco™ StemPro™ Osteogenesis Differentiation Kit	Each
A1007101	Gibco™ StemPro™ Chondrogenesis Differentiation Kit	Each



Cat. No.	Description	Quantity
A1007001	Gibco™ StemPro™ Adipogenesis Differentiation Kit	Each
<b>Recombinant Proteins</b>		
PHG0264	Gibco™ Human FGF-basic (FGF-2/bFGF) (aa 1-155) Recombinant Protein	10 µg
PHC9414	Gibco™ Human Flt-3 Ligand (FLT3L) Recombinant Protein	10 µg
PHC2015	Gibco™ Human GM-CSF Recombinant Protein	10 µg
PHC0026	Gibco™ Human IL-2 Recombinant Protein	10 µg
PHC9154	Gibco™ Human IL-15 Recombinant Protein	10 µg
PHG0044	Gibco™ Human PDGF-BB Recombinant Protein	5 µg
ENRSCF10	Gibco™ Human SCF Recombinant Protein	10 µg
PHG9204	Gibco™ Human TGF-beta 1 Recombinant Protein	5 µg

# Characterization and Analysis

Analyze and characterize your cells using phenotyping kits, cytotoxicity and endotoxin assays, flow cytometry, and more with products available through the Fisher Scientific channel.



Cat. No.	Description	Quantity
<b>Phenotyping Kits</b>		
A42923	Invitrogen™ eBioscience™ Essential Human T-Cell Phenotyping Kit	Each
A42925	Invitrogen™ eBioscience™ Essential Human Treg Phenotyping Kit	Each
A42927	Invitrogen™ eBioscience™ Essential Human Th1/Th17 Phenotyping Kit	Each
<b>Cytotoxicity Assays</b>		
C20300	CyQUANT™ LDH Cytotoxicity Assay	200 Assays



Cat. No.	Description	Quantity
C20301	CyQUANT™ LDH Cytotoxicity Assay	1,000 Assays
<b>Endotoxin Testing</b>		
PIA39553	Thermo Scientific™ Pierce™ Chromogenic Endotoxin Quant Kit	240 Reactions
<b>Flow Cytometry Instruments</b>		
BDB661311*	BD Accuri™ C6 Plus Flow Cytometer System	Each
BDB661310*	BD Accuri™ C6 Plus Flow Cytometer System, Includes BD CSampler Plus, a 24-Tube Rack, and 96-Well Plate Automated Sample Loader	Each
*Available in the U.S. only.		
<b>Endotoxin Testing and Detection Kits</b>		
12-333-005	FUJIFILM Wako PYROSTAR™ ES-F Kit	200 Tests
PIA39552S	Thermo Scientific™ Pierce™ Chromogenic Endotoxin Quant Kit	30 Reactions
PIA39552	Thermo Scientific™ Pierce™ Chromogenic Endotoxin Quant Kit	60 Reactions
PIA39553	Thermo Scientific™ Pierce™ Chromogenic Endotoxin Quant Kit	240 Reactions
<b>Antibodies</b>		
5012818	Invitrogen™ eBioscience™ CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3)	25 µg
14-107-995	Invitrogen™ eBioscience™ CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3)	10 mg

# Cryopreservation

Find a variety of cryopreservation media suitable for maintaining the integrity of primary mammalian cells and cell lines, pluripotent and other stem cells, and more. Explore controlled rate freezers, cryogenic storage systems, vials, retrieval systems, and other methods for safely preserving your research and patient samples.



Cat. No.	Description	Quantity
<b>CTS Cryopreservation Media</b>		
A4239301	Gibco™ CTS™ PSC Cryopreservation Kit, Includes CTS PSC Cryomedium (50 mL), CTS RevitaCell Supplement (100X, 5 mL)	Each



Cat. No.	Description	Quantity
A4238801	Gibco™ CTS™ PSC Cryomedium	50 mL
A1371301	Gibco™ CTS™ Synth-a-Freeze™ Medium	50 mL
<b>RUO Cryopreservation Media</b>		
CPP200025	Ad Infitum™ CryoProtectPURE STEM™ DMSO-Free/Serum-Free Cryopreservation Media	25 mL
CPP200100		100 mL
SR3000202	Cytiva HyClone™ Stem Cryopreservation Media	100 mL
12-648-010	Gibco™ Recovery™ Cell Culture Freezing Medium	50 mL
A1254201	Gibco™ Synth-a-Freeze™ Cryopreservation Medium	50 mL
MP920300M2	MP Biomedicals™ CellVation™ Cryopreservation Medium	60 mL
MP0920303M2	MP Biomedicals™ pZerve™ Cryopreservation Solution	60 mL
MP092780349	MP Biomedicals™ 2-8 CELLsium™ Medium for Short-Term Cell Storage	100 mL
MP092780145	MP Biomedicals™ Cryopres™ Dimethyl Sulfoxide (>99.9% USP DMSO)	10 mL
MP092780148	MP Biomedicals™ Cryopres™ Dimethyl Sulfoxide (>99.9% USP DMSO)	50 mL
<b>Storage</b>		
TSCM17M	Thermo Scientific™ CryoMed™ Controlled Rate Freezer, Medical Device without Printer, 0.6 cu. ft. (17 L)	Each
13-762-376	Thermo Scientific™ CryoExtra™ High-Efficiency Cryogenic Storage Systems, 28 cu. ft. (797 L)	Each
12-570-212	Thermo Scientific™ Nunc™ 2D Barcoded Cryobank Vial Systems, 1 mL	960/Case
12-565-998	Thermo Scientific™ Nunc™ 2.0 mL Internally Threaded Universal Tubes	480/Case

## Related Resources

### Product Selection Tools

#### Eurofins Genomics Tool

Take advantage of a service that provides custom synthesis of oligonucleotides and genes.

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#### TaqMan Assay Search Tool

Search by expression, genotyping, copy number, and other parameters.

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### Applications and Methods

#### Cell Culture

Find solutions for seeding, cell expansion, harvesting, detection, analysis, and storage.

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## Programs and Support

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*Restrictions may apply.*

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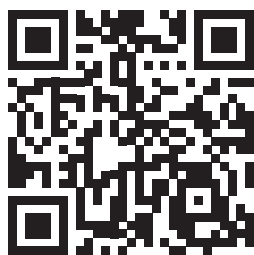
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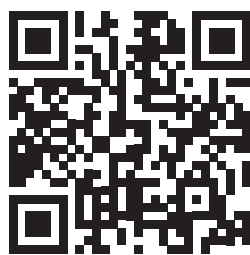
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