

HUMAN CELL CULTURE



STEM CELLS | BLOOD CELLS | PRIMARY CELLS | SPECIALTY MEDIA | CELL ANALYSIS

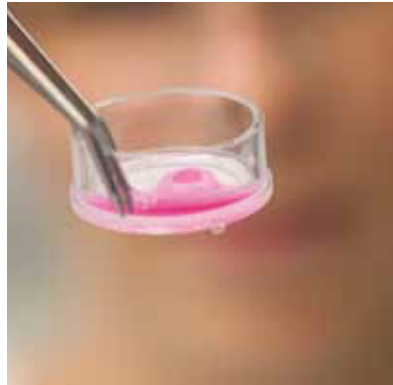
VWR  | vwr.com
We Enable Science

PromoCell

WHO WE ARE

PromoCell is a premier manufacturer of cell culture products. We are known in particular for our broad range of human primary cells, stem cells and blood cells, optimized cell culture media, and comprehensive line of cell biology research products.

We believe that our cell culture products are the most suitable ones for biomedical research because they provide scientists with physiologically accurate models and therefore enable them to obtain better results in their research.



- Our solutions are ethically approved, innovative and of high quality.
- We own the entire development, tissue collection and manufacturing process.
- We offer full support for providing ethical information and traceable documentation of patients' informed consent.
- Our PhD-qualified cell culture experts provide researchers with invaluable support.
- We openly share our cell culture knowledge, which we have built up over the course of more than 25 years.

*PromoCell: providers of human cells and media,
facilitators of biologically relevant research*

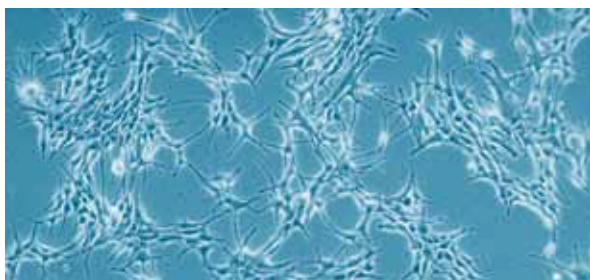


OUR PORTFOLIO



STEM AND BLOOD CELL CULTURE

PromoCell offers a collection of adult stem cells, as well as differentiated blood cells from normal human bone marrow, umbilical cord tissue, placenta, adipose tissue, peripheral blood, and cord blood. High-quality media that simulate the *in vivo* environment as well as optimized differentiation media systems are also available for these cell types.



HUMAN PRIMARY CELL CULTURE

PromoCell primary cells are available from a wide variety of tissues and organs. All of our cells are available either cryopreserved or proliferating. Optimized media for robust growth performance are available for each cell type.



CELL BIOLOGY RESEARCH TOOLS

In our PromoKine brand, we offer a wide range of proven products for cell biology research, such as kits and reagents for cell analysis (e.g. viability/proliferation, cytotoxicity, apoptosis, cell stress/aging and metabolism), cell transfection, fluorescent staining and labeling, mycoplasma detection, elimination and prevention, and numerous antibodies, ELISAs, cytokines and growth factors.



CUSTOM SOLUTIONS

We own the entire development and manufacturing process, which enables us to provide customized solutions to every client worldwide. Our custom production capabilities include make-to-order cell culture media and human primary cells prepared to precisely match our customers' specifications.



LABORATORY TRAINING COURSES

We provide expert advice on the use of human primary cell culture products in our on-site training courses. Our own PromoCell Academy in Heidelberg, Germany also offers a full curriculum including courses on practical cell culturing.

HUMAN STEM AND BLOOD CELL CULTURE

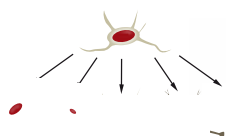
PromoCell offers a collection of adult stem cells from normal human bone marrow, umbilical cord tissue, placenta, adipose tissue, peripheral blood, and cord blood. Our specialty media also allow for expansion and differentiation of a wide variety of blood and stem cells. All cells are obtained from approved donor programs at associated medical centers. High-quality media that simulate the *in vivo* environment as well as optimized differentiation media systems are also available for these cell types.

Stem and Blood Cells

Expansion Media

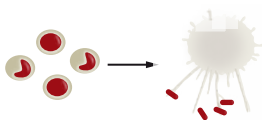
Differentiation Media

Cell Analysis



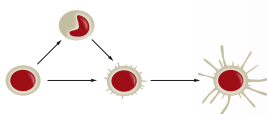
MESENCHYMAL STEM CELL CULTURE

Complete cell culture system including defined mesenchymal stem cells, growth and differentiation media.



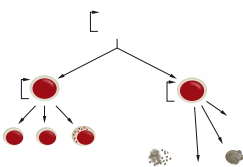
MACROPHAGE GENERATION (M1 / M2)

Straightforward and efficient differentiation of highly pure M1- or M2-macrophages directly from freshly isolated peripheral blood monocytes.



DENDRITIC CELL GENERATION

Easy and efficient generation of immature and fully mature myeloid dendritic cells from peripheral blood monocytes.



CD34⁺ HEMATOPOIETIC PROGENITOR CELL CULTURE

Isolated by positive immunomagnetic selection from fresh cord blood. Suitable HPC expansion and differentiation media are also available.



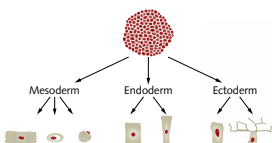
MONONUCLEAR CELL CULTURE

PromoCell Mononuclear Cells (MNC) represent the lymphocyte and monocyte fraction isolated from fresh umbilical cord blood or peripheral blood.



TUMORSPHERE CULTURE OF CANCER STEM CELLS

3D tumorsphere culture system designed for optimal long-term culture of the most commonly used cancer cell lines.



PLURIPOTENT STEM CELL CULTURE (hPSC / iPS)

Defined and xeno-free growth medium for the robust expansion of human pluripotent stem cells – nothing but pure pluripotency.



PERICYTE CULTURE

Non-hematopoietic multipotent mesenchymal-like cells isolated from human placenta tissue and optimized growth medium.

BENEFITS OF OUR CELL CULTURE SOLUTIONS



ASSAY-READY

Time is your most valuable asset. Setting up a well-standardized and robust cell culture or differentiation protocol can be very time-consuming and keeps you from focusing on your experiments. For this and many additional applications, we offer ready-to-use cell growth and differentiation media together with detailed cell culture protocols and application notes.

OPTIMIZED FOR EACH CELL TYPE

High-quality media are vital for successful cell culturing. PromoCell therefore adheres to strict quality standards and produces media using only raw materials from strictly approved sources. We have also invested great effort in media optimization and have replaced serum with defined substances wherever possible. This ensures effective cell growth and avoids the unpredictable effects of indeterminate compounds.



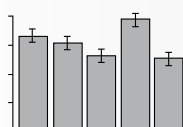
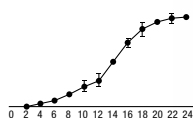
ALL YOU NEED FOR CELL CULTURE

PromoCell offers a wide range of reagents and supplements for cell culture. They include enzyme mixtures for tissue and cell dissociation, buffers for daily cell culture work, and components for supplementing various culture media, such as cytokines and growth factors.



CELL CULTURE MADE SIMPLE

Ready-to-use media, detailed culturing protocols, and second-to-none personalized scientific support.



REPRODUCIBLE RESULTS

Each produced cell and media batch is stringently tested by our quality control department to ensure robust growth performance under standardized conditions.

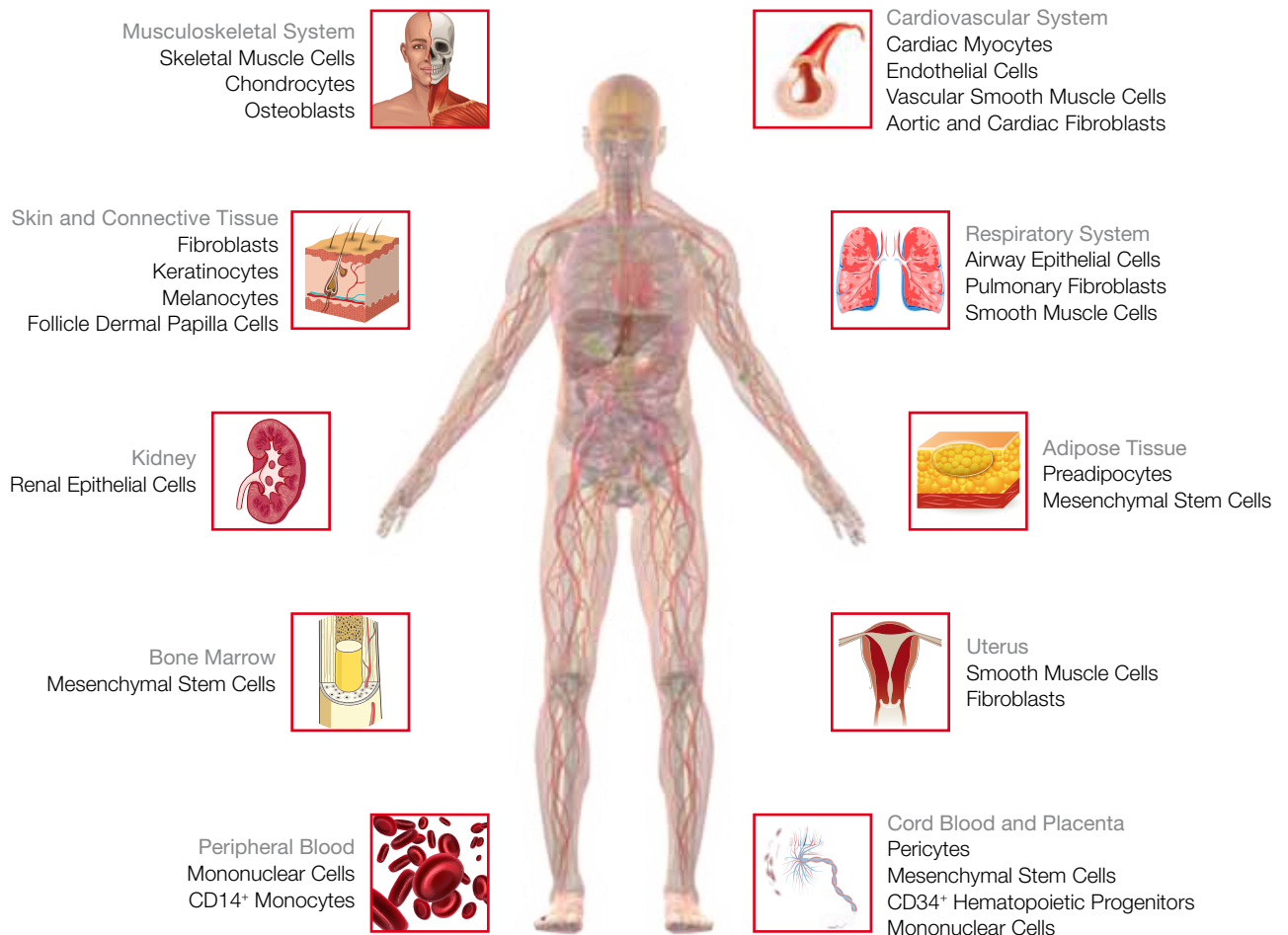


VALIDATED BY RESEARCHERS WORLDWIDE

Our cell culture products have been published in over 3000 independent research publications worldwide in high-impact peer-reviewed journals over the past five years.

HUMAN CELL TYPES BY TISSUE

PromoCell offers a wide variety of high-quality human primary cells. The tissue used for isolating these cells is obtained from approved medical centers while complying with strict ethical standards. All PromoCell primary cells are available either cryopreserved or proliferating. Each cell batch is tested for cell type specific markers, cell morphology, population doubling time, and proliferation capacity. In addition, tests to confirm the absence of HIV 1, HIV 2, HBV, HCV, fungi, mycoplasma, and other bacteria are performed.



Organ

Tissue

Primary Cells

PHYSIOLOGICALLY RELEVANT SOLUTIONS
Human primary cells feature tissue characteristics close to *in vivo* conditions.

INDIVIDUAL DONOR CHARACTERISTICS
For studying cells from donors of different genders, ages and ethnicities.

VERIFIED CELL IDENTITY AND FUNCTION
Our strict quality control ensures correct cellular identity, growth and differentiation performance.

CELL BIOLOGY RESEARCH TOOLS

ALL YOU NEED FOR YOUR EXPERIMENTS

Choose from our wide range of products for:

Cell Analysis

- Cell Viability and Proliferation Kits
- Cytotoxicity Kits
- Live/Dead and Apoptosis Kits
- Cell Stress, Metabolism and Aging Kits
- Angiogenesis, Cell Migration and Invasion Kits
- 3D Cell Culture Kits
- Individual Biochemicals for Cell Analysis

Fluorescent Labeling and Staining

- PromoFluor Dyes for Antibody, Protein and Nucleic Acid Labeling
- Fluorescent Cell Stains
- Fluorescent Indicators

Cell Transfection

- PromoFectin Reagents
- Magnet-Assisted Transfection

Microbial Detection, Elimination and Prevention

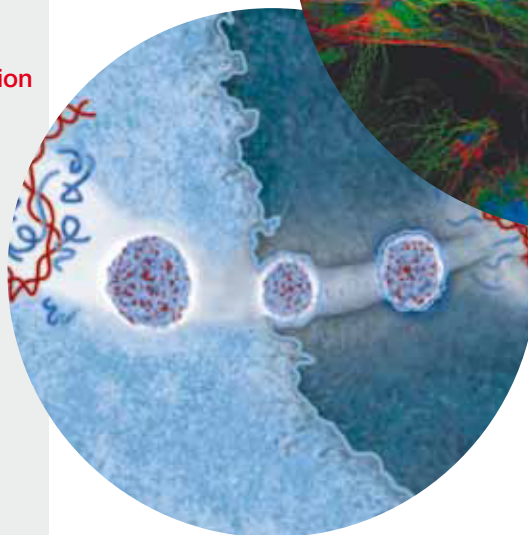
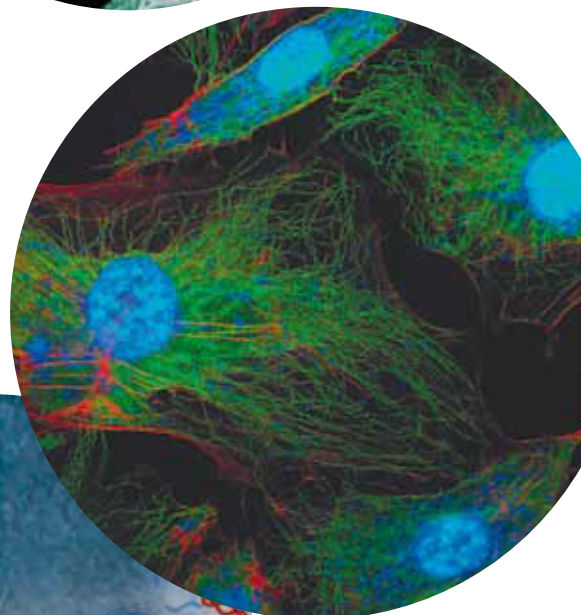
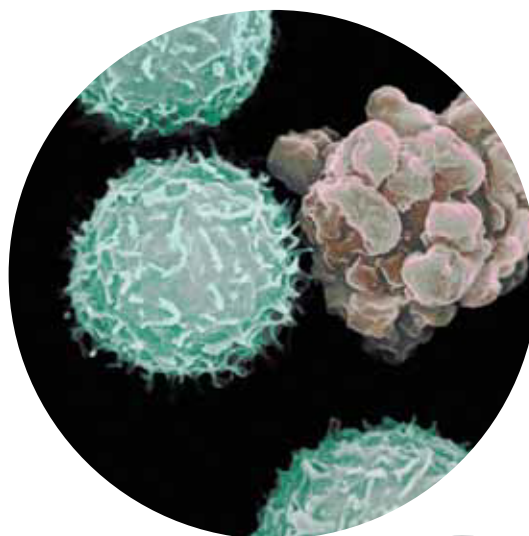
- Mycoplasma and Bacteria Detection Kits (conventional and real-time PCR)
- Mycoplasma Elimination Reagents
- Surface Disinfectant Sprays and Wipes
- Water Disinfectants/Stabilizers

Cytokines and Growth Factors

- >700 human, mouse and rat cytokines/GFs
- Derived from different host organisms
- High purity and biological activity
- Endotoxin-free cytokines/GFs also available

Antibodies and ELISAs

- >2,000 mono- and polyclonal antibodies tested for different applications
- >600 ELISAs (available as ready-to-use ELISAs or ELISA development kits)



PromoKine

CARDIOVASCULAR RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Large Vessel Endothelial Cells: page 17
- Microvascular Endothelial Cells: page 17/18
- Smooth Muscle Cells: page 19
- Cardiac Myocytes: page 17
- Cardiac Fibroblasts: page 18

Featured Cell Biology Products

- Angiogenesis Assays
- Cell Migration and Invasion Assays
- Cell Viability and Proliferation Assays
- Live/Dead and Apoptosis Assays
- Cell Stress and Metabolism Assays
- Antibodies, ELISAs and Recombinant Proteins (e.g. CT-1, ICAM, IL-6, TGF- β , TNF- α , VCAM, VEGF)

Research Applications

- Atherosclerosis
- Hypertension
- Stroke
- Cardiac diseases
- Ischemia



STEM CELL RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Mesenchymal Stem Cells: page 16
- Pluripotent Stem Cells (hPSC): page 16
- Pericytes: page 16
- Hematopoietic Progenitor Cells (CD34⁺): page 16
- Monocytes (CD14⁺): page 16
- Mononuclear Cells (PBMC): page 16

Featured Cell Biology Products

- Cytokines, Antibodies and ELISAs (e.g. Activin, BMP, EGF, FGF, flt-3 Ligand, GM-CSF, HGF, LIN-28, Nanog, SCF, Sox-2)
- Stem Cell Fate Regulators
- Magnet-Assisted Transfection
- 3D Cell Culture Kits

Research Applications

- Cell-based therapies
- Regenerative medicine
- Tissue engineering
- Hematology research
- Immunological studies



Stem Cell Research

DERMATOLOGICAL RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Keratinocytes: page 18
- Melanocytes: page 18/19
- Dermal Fibroblasts: page 17
- Dermal Microvascular Endothelial Cells: page 17
- Follicle Dermal Papilla Cells: page 18
- Preadipocytes: page 19

Featured Cell Biology Products

- Cytotoxicity and Apoptosis Assays
- Senescence Detection Assays
- Cell Cycle and Tyrosinase Assays
- Cell Stress and Aging Assays
- Cytokines (e.g. KGF, FGF) and the corresponding Antibodies and ELISAs

Research Applications

- 3D skin models
- Wound healing
- Cosmetic and toxicological testing
- Hair growth and regeneration
- Skin aging and pigmentation



Dermatological Research

RESPIRATORY RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Airway Epithelial Cells: page 18
- Pulmonary Microvascular Endothelial Cells: page 18
- Airway Smooth Muscle Cells: page 19
- Pulmonary Fibroblasts: page 18

Featured Cell Biology Products

- Cell Viability/Proliferation and Apoptosis Assays
- Cell Migration and Invasion Assays
- Fluorescent Cell Stains
- Cell Stress Assays and Indicators
- Inflammatory Cytokines and the corresponding Antibodies and ELISAs (e.g. Endothelin, Eotaxin, IL-8, IL-13, TGF- β)

Research Applications

- Air/liquid interface cultures
- Toxicology testing
- Chronic respiratory diseases (COPD, asthma)
- Pulmonary hypertension
- Pulmonary Fibrosis



Respiratory Research

CANCER RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Cancer Stem Cell Medium: page 16
- Macrophage Generation Media: page 16
- Dendritic Cell Generation Media: page 16
- Epithelial Cells (Airway, Renal): page 18
- Osteoblasts: page 19
- Skin cells (Melanocytes, Keratinocytes): page 18/19
- Microvascular Endothelial Cells: page 17/18
- Pericytes: page 16

Featured Cell Biology Products

- Angiogenesis Assays
- Cell Migration and Invasion Assays
- Cell Viability/Proliferation and Apoptosis Assays
- 3D Cell Culture Kits
- Antibodies, ELISAs and Recombinant Proteins (e.g. Ang-2, BMP, EGF, FGF, Interleukins, Oncostatin, TGF- β , TNF- α , VEGF)

Research Applications

- Drug screening and testing
- Toxicological studies
- Immunotherapies
- Angiogenesis
- Tissue invasion and metastasis



DIABETES RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Preadipocytes: page 19
- Skeletal Muscle Cells: page 19
- Endothelial Cells: page 17/18
- Smooth Muscle Cells: page 19
- Cardiac Myocytes: page 17
- Fibroblasts: page 18
- Renal Epithelial Cells: page 18

Featured Cell Biology Products

- Cytokines, Antibodies and ELISAs (e.g. Adiponectin/Acrp30, IL-6, Insulin, Leptin, MCP-1, Resistin, Visfatin)
- Cell Stress and Metabolism Assays
- Live/Dead and Apoptosis Assays
- Fluorescent Cell Stains and Labels
- Fluorescent Calcium Indicators

Research Applications

- Insulin metabolism
- Obesity research
- Diabetic myopathy
- Diabetes-related impaired wound healing
- Endothelial dysfunction in diabetes



Diabetes Research

IMMUNOLOGICAL RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Hematopoietic Progenitor Cells (CD34⁺): page 16
- Monocytes (CD14⁺): page 16
- Mononuclear Cells (PBMC): page 16
- Macrophage Generation Media: page 16
- Dendritic Cell Generation Media: page 16

Featured Cell Biology Products

- Cytokines, Antibodies and ELISAs (e.g. HGF, IFN- γ , Interleukins, M-CSF, SCF, sRANKL, TNF- α)
- Cell Migration and Invasion Assays
- PromoFectin-Macrophage and Magnet-Assisted Transfection
- Fluorescent Cell Stains and PromoFluor Labels

Research Applications

- Immunotherapy
- Cancer research
- Immunosuppressive functions of MSCs
- Treatment of immune disorders
- Hematopoietic differentiation



BIOMATERIALS RESEARCH

TOOLS FOR PHYSIOLOGICALLY RELEVANT RESULTS

PRODUCT OVERVIEW

Human Cells and Media Culture Systems

- Osteoblasts: page 19
- Chondrocytes: page 17
- Dermal Fibroblasts: page 18
- Vascular Smooth Muscle Cells: page 19
- Endothelial Cells: page 17/18

Featured Cell Biology Products

- Cytokines, Antibodies and ELISAs (e.g. BMPs, EGF, FGF, IGFs, IL-1 α /IL-1 β , MMPs, PDGF, TGF- β , TNF- α , VEGF)
- Cell Viability and Proliferation Assays
- Cytotoxicity and Live/Dead Assays
- PromoFectin and Magnet-Assisted Transfection
- Cell Model Systems and 3D Cell Culture Kits
- Stem Cell Fate Regulators

Research Applications:

- Regenerative medicine
- Biocompatibility studies
- Orthopedic implant testing
- Stent material testing



Biomaterials Research



PRODUCT LISTING

HUMAN STEM AND BLOOD CELL CULTURE

Cell type	Description	Cat. no.	VWR No.	Quantity	Marker
Mesenchymal Stem Cells	Human Mesenchymal Stem Cells from Bone Marrow (hMSC-BM)	C-12974	10172-152	500,000 cells	CD73 ⁺ , CD90 ⁺ , CD105 ⁺ , CD14 ⁻ , CD19 ⁻ , CD34 ⁻ , CD45 ⁻ , HLA-DR
	Human Mesenchymal Stem Cells from Umbilical Cord Matrix (hMSC-UC)	C-12971	10172-148	500,000 cells	
	Human Mesenchymal Stem Cells from Adipose Tissue (hMSC-AT)	C-12977	10172-156	500,000 cells	
	Mesenchymal Stem Cell Growth Medium 2 (ready-to-use)	C-28009	75812-652	500 ml	Growth performance tested
	Mesenchymal Stem Cell Growth Medium DXF (ready-to-use, serum-free)	C-28019	10172-384	500 ml	Differentiation tested
	Mesenchymal Stem Cell Adipogenic Differentiation Medium 2 (ready-to-use)	C-28016	75812-654	100 ml	
	Mesenchymal Stem Cell Chondrogenic Differentiation Medium (ready-to-use)	C-28012	10172-376	100 ml	
	Mesenchymal Stem Cell Osteogenic Differentiation Medium (ready-to-use)	C-28013	10172-378	100 ml	
	Mesenchymal Stem Cell Neurogenic Differentiation Medium (ready-to-use)	C-28015	10172-382	100 ml	
Pericytes	Human Pericytes from Placenta (hPC-PL)	C-12980	10172-160	500,000 cells	CD31 ⁻ , CD34 ⁻ , CD105 ⁺ , CD146 ⁺
CD34 ⁺ Progenitor Cells	Human CD34 ⁺ Progenitor Cells from Cord Blood (hCD34 ⁺ -CB), single donor	C-12921	10175-190	100,000 cells	CD34 ⁺
	Hematopoietic Progenitor Expansion Medium DXF	C-28021	10172-388	500 ml	Expansion tested
	Cytokine Mix E for HPC-Expansion Medium DXF	C-39890	10172-530	1 Mix for 100 ml	
CD14 ⁺ Monocytes	Human CD14 ⁺ Monocytes from Peripheral Blood (hMoCD14 ⁺ -PB), single donor	C-12909	10175-182	10 million cells	CD14 ⁺
Mononuclear Cells	Human Mononuclear Cells from Peripheral Blood (hMNC-PB), single donor, ultra-pure	C-12907	10175-178	25 million cells	Lymphocyte, Monocyte, and Granulocyte content tested
	Human Mononuclear Cells from Cord Blood (hMNC-CB), single donor, ultra-pure	C-12901	10175-174	25 million cells	
	Mononuclear Cell Medium (ready-to-use)	C-28030	10172-392	500 ml	N/A
Cancer Cells	3D Cancer Stem Cell Medium	C-28070	75794-940	250 ml	N/A
Pluripotent Stem Cells	hPSC Growth Medium DXF	C-28060	10183-016	500 ml	Oct-3/4 ⁺ , SSEA-1 ⁻ , SSEA-4 ⁺
Dendritic Cells	DC Generation Medium (ready-to-use)	C-28050	10172-396	250 ml	CD14 ⁻ , CD45 ⁺ , CD83 ⁺
	DC Generation Medium DXF (ready-to-use, serum-free)	C-28052	10172-400	250 ml	
Macrophages	M1-Macrophage Generation Medium DXF (ready-to-use)	C-28055	10172-406	250 ml	CD68 ⁺ , CD80 ⁺
	M2-Macrophage Generation Medium DXF (ready-to-use)	C-28056	10172-408	250 ml	CD68 ⁺ , CD163 ⁺

PRODUCT LISTING

HUMAN PRIMARY CELLS AND MEDIA

Cell type	Description	Cat. no.	VWR No	Quantity	Passage after thawing	Marker	Recommended culture media	VWR No.
Cardiac Myocytes	Human Cardiac Myocytes (HCM)	C-12810	10175-168	500,000 cells	P2	Sarcomeric α -actinin ⁺ Slow muscle myosin ⁺	C-22070	10172-286
Chondrocytes	Human Chondrocytes (HCH)	C-12710	10172-126	500,000 cells	P2	Differentiation tested	C-27101	10172-346
Endothelial Cells (large vessels)	Human Umbilical Vein Endothelial Cells (HUVEC) single donor	C-12200	10171-906	500,000 cells	P1	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22010 C-22011	10172-276 10172-278
	Human Umbilical Vein Endothelial Cells (HUVEC) pooled	C-12203	10171-910	500,000 cells	P1	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22010 C-22011	10172-276 10172-278
	Human Umbilical Vein Endothelial Cells (HUVEC) isolated in Growth Medium 2, single donor	C-12206	10171-914	500,000 cells	P1	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22011	10172-278
	Human Umbilical Vein Endothelial Cells (HUVEC) isolated in Growth Medium 2, pooled	C-12208	10171-918	500,000 cells	P1	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22011	10172-278
	Human Umbilical Vein Endothelial Cells (HUVEC) pre-screened	C-12205	10171-912	500,000 cells	P1	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺ VEGF response ⁺	C-22010 C-22011	10172-276 10172-278
	Human Umbilical Artery Endothelial Cells (HUAEC)	C-12202	10171-908	500,000 cells	P1	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22010 C-22011	10172-276 10172-278
	Human Aortic Endothelial Cells (HAoEC)	C-12271	10171-970	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
	Human Coronary Artery Endothelial Cells (HCAEC)	C-12221	10171-940	500,000 cells	P3	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
	Human Pulmonary Artery Endothelial Cells (HPAEC)	C-12241	10171-952	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22010 C-22011	10172-276 10172-278
	Human Saphenous Vein Endothelial Cells (HSAVEC)	C-12231	10171-948	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22010 C-22011	10172-276 10172-278
Endothelial Cells (microvascular)	Human Dermal Micro-vascular Endothelial Cells (HDMEC) juvenile foreskin	C-12210	10171-922	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
	Human Dermal Micro-vascular Endothelial Cells (HDMEC) adult donor	C-12212	10171-926	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
	Human Dermal Micro-vascular Endothelial Cells (HDMEC) pre-screened	C-12215	10171-930	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺ VEGF response ⁺	C-22020 C-22022	10172-280 10172-282
	Human Dermal Blood Endothelial Cells (HDBEC) juvenile foreskin	C-12211	10171-924	500,000 cells	P2	Podoplanin ⁻ CD31 ⁺	C-22020	10172-280
	Human Dermal Blood Endothelial Cells (HDBEC) adult donor	C-12225	10171-944	500,000 cells	P2	Podoplanin ⁻ CD31 ⁺	C-22020	10172-280
	Human Dermal Lymphatic Endothelial Cells (HDLEC) juvenile foreskin	C-12216	10171-932	500,000 cells	P2	Podoplanin ⁺ CD31 ⁺	C-22022	10172-282
	Human Dermal Lymphatic Endothelial Cells (HDLEC) adult donor	C-12217	10171-934	500,000 cells	P2	Podoplanin ⁺ CD31 ⁺	C-22022	10172-282

Cell type	Description	Cat. no.	VWR No.	Quantity	Passage after thawing	Marker	Recommended culture media	VWR No.
Endothelial Cells (microvascular)	Human Cardiac Microvascular Endothelial Cells (HCMEC)	C-12285	10171-978	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
	Human Pulmonary Microvascular Endothelial Cells (HPMEC)	C-12281	10171-974	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
	Human Uterine Microvascular Endothelial Cells (HUtMEC)	C-12295	10171-986	500,000 cells	P2	vWF ⁺ CD31 ⁺ Dil-Ac-LDL uptake ⁺	C-22020 C-22022	10172-280 10172-282
Epithelial Cells	Human Nasal Epithelial Cells (HNEpC)	C-12620	10175-148	500,000 cells	P2	Cytokeratin ⁺	C-21060	10175-240
	Human Tracheal Epithelial Cells (HTEpC)	C-12644	10175-160	500,000 cells	P2	Cytokeratin ⁺	C-21060	10175-240
	Human Bronchial Epithelial Cells (HBEpC)	C-12640	10175-152	500,000 cells	P2	Cytokeratin ⁺	C-21060	10175-240
	Human Small Airway Epithelial Cells (HSAEpC)	C-12642	10175-156	500,000 cells	P2	Cytokeratin ⁺	C-21070	10175-242
	Human Renal Epithelial Cells (HREpC)	C-12665	10172-122	500,000 cells	P2	Cytokeratin ⁺	C-26001 C-26030	10172-306 10172-314
	Human Renal Cortical Epithelial Cells (HRCEpC)	C-12660	10172-118	500,000 cells	P2	Cytokeratin ⁺	C-26001 C-26030	10172-306 10172-314
	Human Placental Epithelial Cells (HPIEpC)	C-12395	10172-010	500,000 cells	P2	Cytokeratin ⁺	C-26040	10172-316
Fibroblasts	Normal Human Dermal Fibroblasts (NHDF) juvenile foreskin	C-12300	10175-136	500,000 cells	P2	CD90 ⁺	C-23010	10172-044
	Normal Human Dermal Fibroblasts (NHDF) adult donor	C-12302	10175-138	500,000 cells	P2	CD90 ⁺	C-23020	10172-046
	Human Pulmonary Fibroblasts (HPF)	C-12360	10171-990	500,000 cells	P2	CD90 ⁺	C-23020	10172-046
	Human Aortic Adventitial Fibroblasts (HAoAF)	C-12380	10171-998	500,000 cells	P2	CD90 ⁺	C-23020	10172-046
	Human Cardiac Fibroblasts (HCF)	C-12375	10171-994	500,000 cells	P2	CD90 ⁺	C-23025	10172-048
	Human Uterine Fibroblasts (HUF)	C-12385	10172-002	500,000 cells	P2	CD90 ⁺	C-23020	10172-046
Follicle Dermal Papilla Cells	Human Follicle Dermal Papilla Cells (HFDPC)	C-12071	10171-902	500,000 cells	P2	Alkaline phosphatase ⁺	C-26501	10172-332
Keratinocytes	Normal Human Epidermal Keratinocytes (NHEK) juvenile foreskin, single donor	C-12001	10171-886	500,000 cells	P2	Cytokeratin ⁺	C-20011	10175-230
	Normal Human Epidermal Keratinocytes (NHEK) juvenile foreskin, pooled	C-12005	10171-894	500,000 cells	P2	Cytokeratin ⁺	C-20011	10175-230
	Normal Human Epidermal Keratinocytes (NHEK) adult, single donor	C-12003	10171-890	500,000 cells	P2	Cytokeratin ⁺	C-20011	10175-230
	Normal Human Epidermal Keratinocytes (NHEK) adult, pooled	C-12006	10171-896	500,000 cells	P2	Cytokeratin ⁺	C-20011	10175-230
Melanocytes	Normal Human Epidermal Melanocytes (NHEM) juvenile foreskin	C-12400	10172-014	500,000 cells	P2	Mel-5 ⁺	C-24010	10172-078

Cell type	Description	Cat. no.	VWR No.	Quantity	Passage after thawing	Marker	Recommended culture media	VWR No.
Melanocytes	Normal Human Epidermal Melanocytes (NHEM) juvenile foreskin, cultured in M2 Medium	C-12402	10172-016	500,000 cells	P2	Mel-5 ⁺	C-24300	10172-086
	Normal Human Epidermal Melanocytes (NHEM) adult donor, cultured in M2 Medium	C-12403	10172-018	500,000 cells	P2	Mel-5 ⁺	C-24300	10172-086
Osteoblasts	Human Osteoblasts (HOB)	C-12720	10172-128	500,000 cells	P2	Alkaline phosphatase ⁺ Mineralization tested	C-27001 C-27020	10172-338 10172-344
Preadipocytes	Human White Preadipocytes (HWP) subcutaneous	C-12730	10172-130	500,000 cells	P2	Differentiation tested	C-27410 C-27436 C-27438	10172-352 10172-364 10172-368
	Human White Preadipocytes (HWP) visceral	C-12732	10172-134	500,000 cells	P2	Differentiation tested	C-27410 C-27436 C-27438	10172-352 10172-364 10172-368
Skeletal Muscle Cells	Human Skeletal Muscle Cells (SkMC)	C-12530	10172-036	500,000 cells	P2	Sarcomeric myosin ⁺ Differentiation tested	C-23060 C-23061	10172-050 10172-052
Smooth Muscle Cells	Human Aortic Smooth Muscle Cells (HAoSMC)	C-12533	10172-096	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284
	Human Coronary Artery Smooth Muscle Cells (HCASMC)	C-12511	10172-028	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284
	Human Pulmonary Artery Smooth Muscle Cells (HPASMC)	C-12521	10172-032	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284
	Human Umbilical Artery Smooth Muscle Cells (HUASMC)	C-12500	10172-026	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284
	Human Tracheal Smooth Muscle Cells (HTSMC)	C-12565	10172-104	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284
	Human Bronchial Smooth Muscle Cells (HBSMC)	C-12561	10172-100	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284
	Human Uterine Smooth Muscle Cells (HUtSMC)	C-12575	10172-116	500,000 cells	P2	Smooth muscle α -actin ⁺	C-22062	10172-284



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