PromoCell®

Experts in human cell culture

Human primary cells, stem cells, blood and immune cells, and optimized cell culture media

Human Centered Science

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Human Centered Science

Why choose us?

We empower scientists to conduct world-class research by offering an extensive portfolio of human primary cells, stem cells, blood cells, and optimized cell growth and differentiation media. We can fine-tune our flexible manufacturing process to offer customized products that meet your research and manufacturing needs, regardless of the organization's size and stage of your research. For over 30 years, we have continually supplied scientists with the tools and support they need to conduct groundbreaking research.

Our commitment **to quality**

1

Our **trained scientists** are here to support you at every step of your research.

2

Our products meet European and international **quality and ethical standards.**

3

We own the entire manufacturing and tissue procurement process, which allows us to offer **custom cells and media.**

4

We have **over 30 years of expertise** and offer products that are used in 600 peer-reviewed articles every year.

5

Our **ISO 9001:2015 certification** ensures that we provide products that meet your needs and regulatory requirements.

6

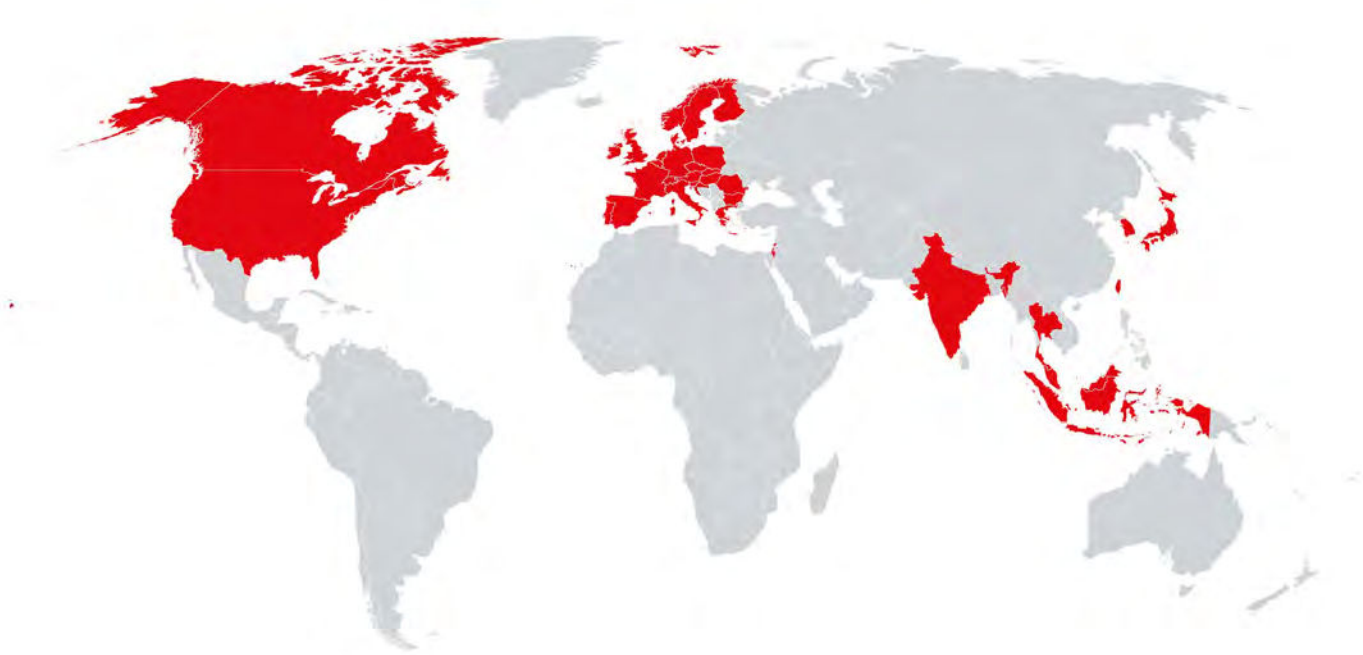
Our quality management system is certified according to the **EXCiPACT™ Good Manufacturing Practice (GMP) standard.**

7

Our wealth of resources ensures **easy access** to information related to our products.

Our locations worldwide

We operate in 38 countries across three continents. This enables us to provide you with all the support you need, quickly and reliably.



Austria
Belgium
Bulgaria
Canada
Croatia
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
India
Indonesia
Ireland
Israel
Italy
Japan
Liechtenstein
Luxembourg
Malaysia
Monaco
Netherlands
Norway
Poland
Portugal
Romania
Singapore
Slovakia
Slovenia
South Korea
Spain
Sweden
Switzerland
Taiwan
Thailand
United Kingdom
United States

We understand your cell culture needs

We're here to support every stage of your cell culture workflow, from research to manufacturing.

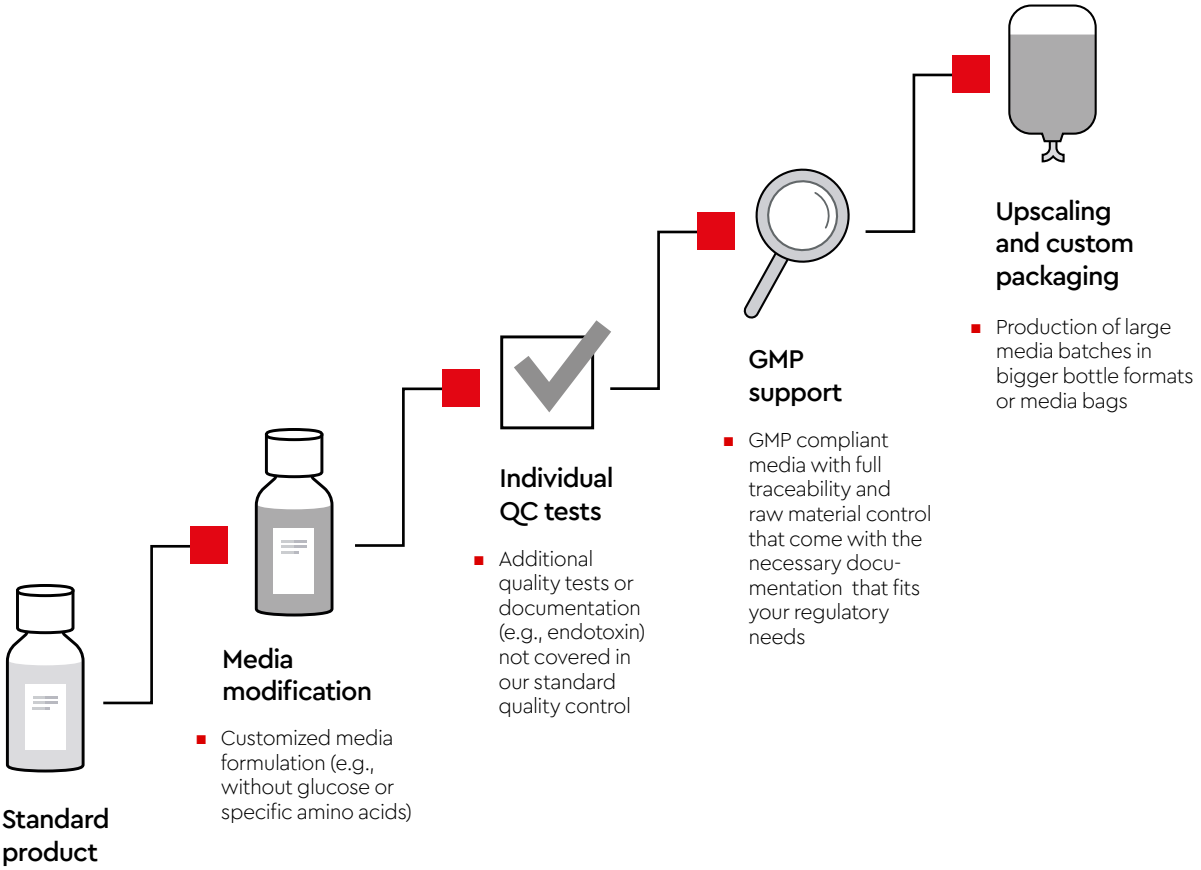
GMP compliant products

Our quality management system is certified according to EXCiPACT™, an internationally recognized GMP standard. Our entire product development pipeline is compliant with international regulatory guidelines. This means that we can offer media and reagents produced in a controlled environment that meets your regulatory requirements. Contact us to discuss your needs and regulatory requirements.

- Our quality management system is certified according the EXCIPACT™ GMP standard
- ISO 9001:2015 certification ensures that we "consistently provide products and services that meet customer and applicable statutory and regulatory requirements"

Customized media according to your needs

The commercial and clinical translation of cell-based therapies requires individualized solutions that span small-scale non-GMP development to GMP compliant scaled-up manufacturing. Our flexible manufacturing pipeline enables us to offer a wide range of customized cell culture media.



Standard product

Media modification

- Customized media formulation (e.g., without glucose or specific amino acids)

Individual QC tests

- Additional quality tests or documentation (e.g., endotoxin) not covered in our standard quality control

GMP support

- GMP compliant media with full traceability and raw material control that come with the necessary documentation that fits your regulatory needs

Upscaling and custom packaging

- Production of large media batches in bigger bottle formats or media bags

Customized cell culture

In addition to our extensive stock of cells from matched donors, we can also isolate cells from specific donors who match your donor specifications.

Do you need cells with a specific HLA type for cytotoxicity screening? Contact us to discuss our large selection of cell types from HLA-typed donors.

We also offer a standardized cell expansion service if you need a large number of cells. After we expand the cells using our standardized expansion protocols, we perform an additional quality control so that you can start your experiments right away.

Scientific advice and support

Our qualified and highly trained cell culture experts can help you elevate your cell culture research by providing scientific support at every step.

Do you need training to handle valuable primary cells? Do you struggle with cell contamination? Contact us to discuss how we can address your cell culture concerns.

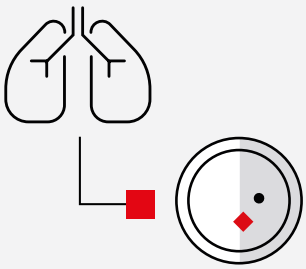
Our portfolio of human cell cultures

Human primary cells

We provide primary cells from various tissues and organs. All our cells are directly isolated from tissues and retain the morphological and functional characteristics of their tissue of origin.

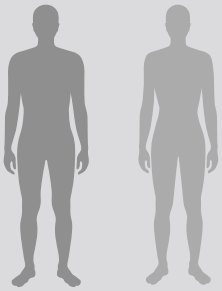
In addition to human primary cells from a wide variety of organs and tissues, we also offer human stem, blood, and immune cells from the bone marrow, umbilical cord, placenta, adipose tissue, peripheral blood, and cord blood. To support you with the culture of human cells, we also offer high-quality media that simulate the *in vivo* environment or promote cell differentiation.

We manufacture all our primary cells and stem cells according to the highest ethical and legal standards. When obtaining human tissues from donors, we follow strict European biomedical conventions, ethical standards, and privacy regulations.



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 culture media

Using high-quality media is vital for successful cell culture. To ensure that we provide you with high-quality media, we adhere to strict quality standards and produce media using only raw materials from strictly approved sources.

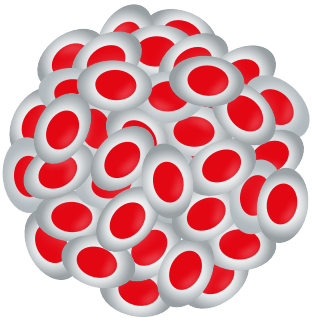
We are committed to providing media that is standardized and optimized for your needs and have replaced serum with well-defined substances wherever possible. Using serum-free media minimizes the risk of introducing adventitious agents to your cell cultures, provides lot-to-lot consistency, and simplifies regulatory submissions. The use of our serum-free media also ensures optimized cell growth while avoiding the unpredictable effects of indeterminate compounds.

Time is your most valuable asset. Setting up a standardized and robust cell culture or differentiation protocol can be laborious and time-consuming. To help you focus on your research rather than optimizing cell differentiation protocols, we offer ready-to-use differentiation media, along with detailed cell culture protocols and application notes.

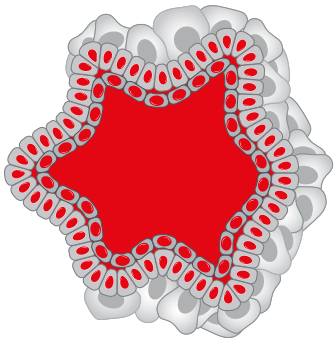
In vitro 3D cell models

Generating physiologically relevant data relies on the use of models that closely resemble the biological systems of interest. 3D cell models allow for a better understanding of complex biology in a physiologically relevant context. We have the expertise and appropriate systems to support your journey toward the future of *in vitro* research.

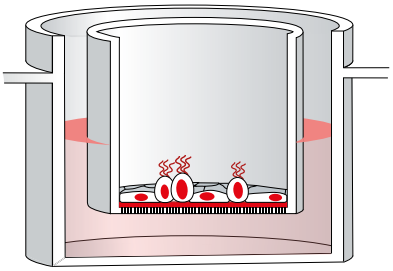
From spheroids to organoids, air-liquid interface culture, and magnetic 3D culture, we offer all the reagents, detailed cell culture protocols, and application notes to help you establish your 3D cell models.



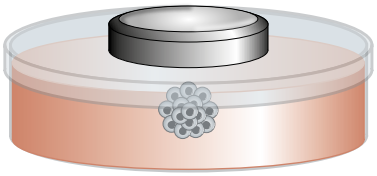
Spheroids



Organoids



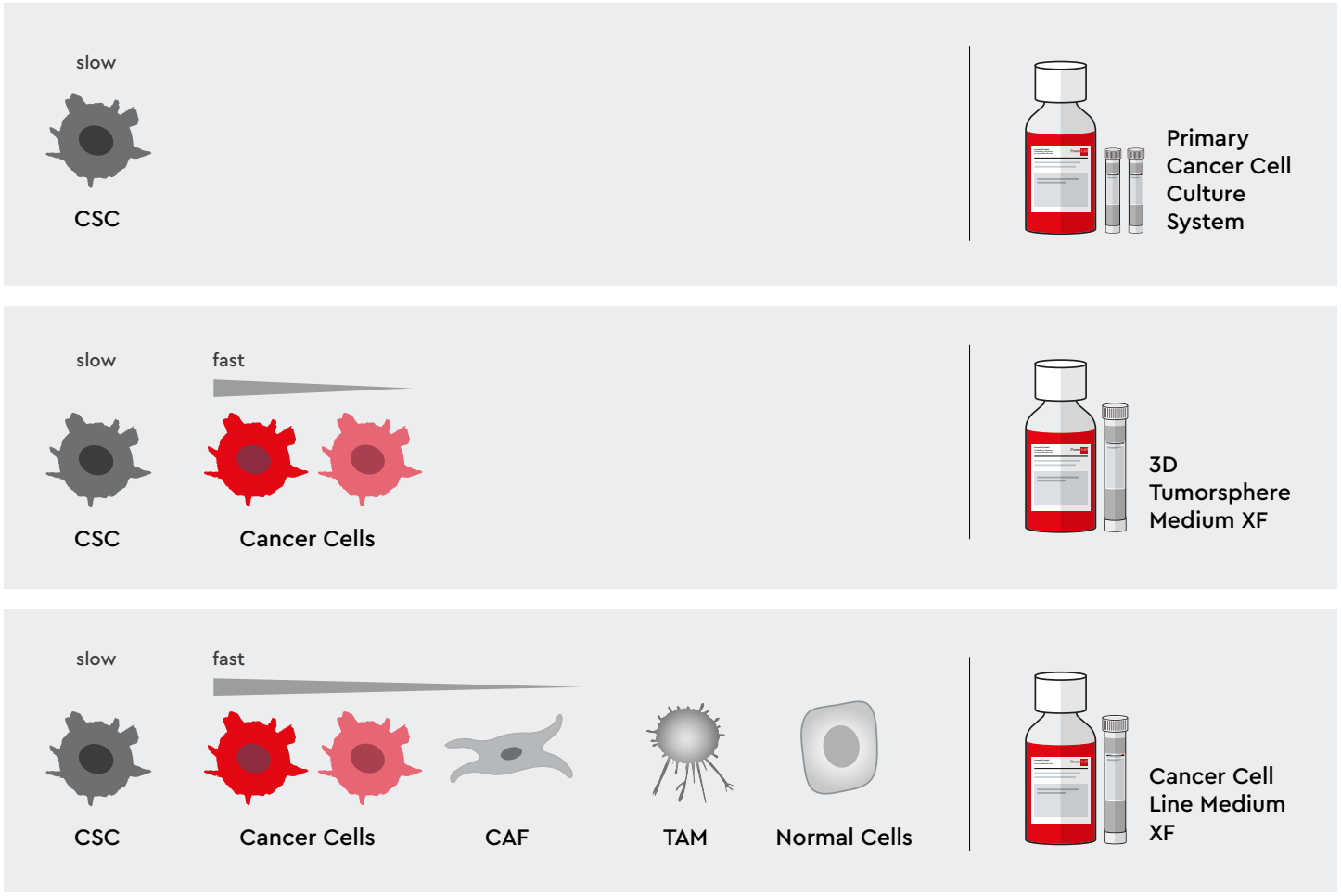
Air-liquid interface



Magnetic 3D cell culture

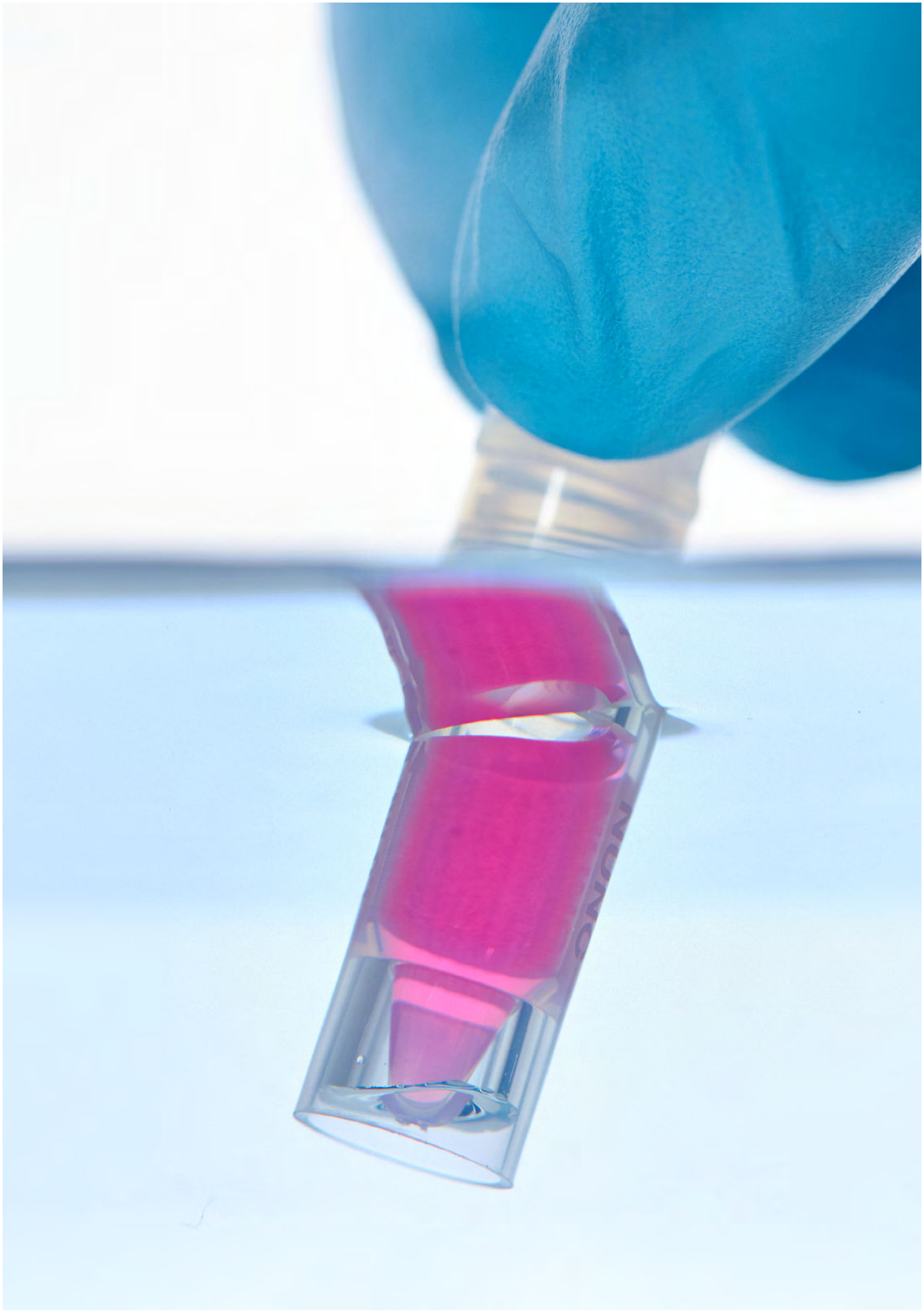
Cancer cell culture

We offer a portfolio of cancer cell media to help you establish primary cancer cell lines from biopsies, develop 3D tumor models, or build screening assays.



Our **Primary Cancer Culture System, 3D Tumorsphere Medium XF, and Cancer Cell Line Medium XF** are ideal for culturing cancer stem cells (CSCs). Despite making up 1–2% of all cells in a tumor, CSCs play a critical role in tumor development, progression, and metastasis. Studying CSCs is, therefore, essential for understanding cancer biology and for developing effective therapies.

All three media types are synthetic, animal component-free, and xeno-free while containing all the nutrients necessary for the growth and long-term cultivation of CSCs in 2D or 3D cultures. You can also use these media to culture most established cell lines and to establish cell lines from biopsies of various cancer types. In addition to CSC research, our cancer cell culture media can be used for drug discovery and cell-based therapy development using co-cultures of cancer and immune cells.



Our variety of human primary cells

Established cell lines are an important tool for biomedical research but do not necessarily reflect the biology and behavior of cells in tissues and organs. In contrast, primary cells closely resemble the genetic makeup and behavior of the tissue of origin. This makes human primary cells a physiologically relevant cell model for studying complex biological processes and human diseases.

The process of isolating and culturing cells from tissues and organs is complex and can introduce variations in your data. To ensure that your research is reproducible, our experts use highly standardized reagents and protocols when isolating primary cells from donors.

We offer a wide variety of high-quality human primary cells. We isolate our primary cells from tissues obtained from approved medical centers that comply with strict ethical and regulatory standards. All our primary cells are available as either cryopreserved or proliferating cells. Each cell batch is tested for cell type-specific markers, morphology, population doubling time, and proliferation capacity. Additionally, we test all our primary cells to confirm that they are not infected with HIV1, HIV2, HBV, HCV, fungi, or mycoplasma.

Musculoskeletal system

Skeletal Muscle Cells
Chondrocytes
Osteoblasts

Skin and connective tissue

Fibroblasts
Keratinocytes
Melanocytes
Dermal Endothelial Cells
Follicle Dermal Papilla Cells

Uterus

Smooth Muscle Cells
Fibroblasts
Endothelial Cells

Bone marrow

Mesenchymal Stem Cells

Kidney

Renal Epithelial Cells

Cardiovascular system

Smooth Muscle Cells
Endothelial Cells
Myocytes
Fibroblasts

Umbilical cord and placenta

Pericytes
Mesenchymal Stem Cells
Mononuclear Cells
Smooth Muscle Cells
CD34⁺ Progenitor Cells

Respiratory system

Airway Epithelial Cells
Fibroblasts
Endothelial Cells
Smooth Muscle Cells

Adipose tissue

Preadipocytes
Mesenchymal Stem Cells

Peripheral blood

Macrophages
Mononuclear Cells

HLA-typed cells

All our human primary cells are sourced from HLA-typed donors. Along with the cells, we also offer HLA Typing Certificate with high-resolution (4-digit) typing results for HLA-A, -B, -C, -DPA1/DPB1, -DQA1/DQB1, and -DRB1/DRB345.

Primary cells from donors with a known disease

We offer a broad range of cells from donors who have the disease of your research focus. These cells feature the same specifications and undergo the same rigid quality control tests as our primary cells from normal donors. Our quality control tests include marker characterization, growth performance, and morphological characterization.

Our mesenchymal stem cells

We offer a collection of human mesenchymal stem cells isolated from the bone marrow, umbilical cord, and adipose tissue. All cells are obtained from approved donor programs at associated medical centers. We also offer optimized differentiation media and high-quality media that simulate the *in vivo* environment of primary cells.

Bone marrow

Human Mesenchymal Stem Cells from Bone Marrow (hMSC-BM)

Cat. No. C-12974
Marker expression:
$CD105^+$ | $CD73^+$ | $CD90^+$
$CD45^-$ | $CD34^-$ |
$CD14^-$ | $CD19^-$ | $HLA\text{-}DR^-$

Adipose tissue

Human Mesenchymal Stem Cells from Adipose Tissue (hMSC-AT)

Cat. No. C-12977
Marker expression:
$CD105^+$ | $CD73^+$ | $CD90^+$
$CD45^-$ | $CD34^-$ |
$CD14^-$ | $CD19^-$ | $HLA\text{-}DR^-$

Umbilical cord

Human Mesenchymal Stem Cells from Umbilical Cord Matrix ((hMSC-UC)

Cat. No. C-12971
Marker expression:
$CD105^+$ | $CD73^+$ | $CD90^+$
$CD45^-$ | $CD34^-$ |
$CD14^-$ | $CD19^-$ | $HLA\text{-}DR^-$

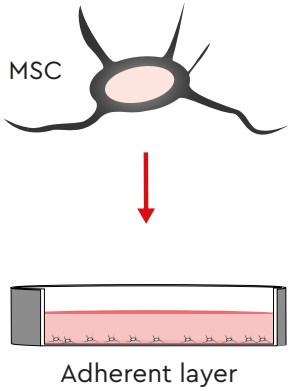
Key advantages of our mesenchymal stem cells

- **Verified expression of surface markers** that meet the International Society for Cellular Therapy (ISCT) criteria
- **Standardized and well-characterized**, enabling reproducible research
- Possibility of **large-scale** production
- **Confirmed differentiation** into osteoblasts, adipocytes, and chondrocytes
- Expression of **trilineage surface markers** when cultured in our optimized media
- **Custom media** according to your needs and regulatory requirements
- **GMP compliant media**

MSC sources

Stem cells are often poorly characterized, and their use requires time-consuming and standardized protocols. To support translation of cellular therapies, the International Society for Cell and Gene Therapy (ISCT) has described three kex characteristics of MSCs:

1 Adherence to plastic



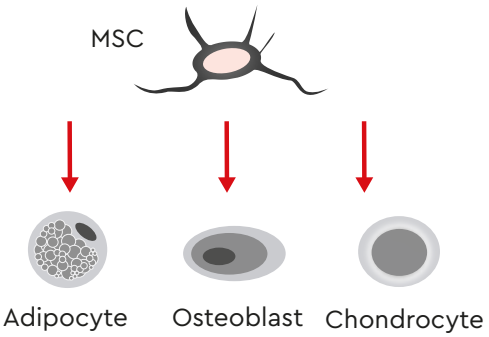
MSCs must adhere to plastic to grow under standard culture conditions

2 Marker expression

Positive ≥95% +	Negative ≤2% +
■ $CD105^+$	■ $CD45^-$
■ $CD73^+$	■ $CD34^-$
■ $CD90^+$	■ $CD14^-$ or $CD11b^-$
	■ $CD79\alpha^-$ or $CD19^-$
	■ $HLA\text{-}DR^-$

MSCs are characterized by the presence or absence of specific surface markers

3 Multipotent differentiation potential



MSCs are multipotent and can differentiate into various cell lineages

MSC culture

Our optimized growth media ensure consistent growth and maintenance of the trilineage differentiation potential. Our media contain all the growth factors and supplements necessary for the robust expansion of human mesenchymal stem cells and the generation of high-quality multipotent cells.

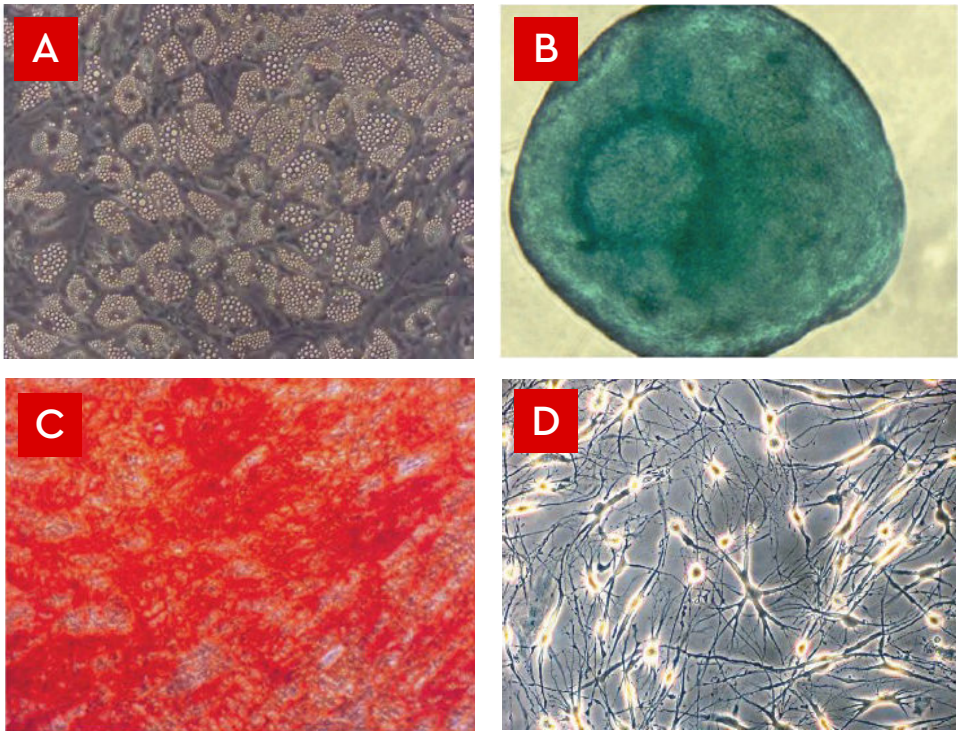


Fig. 3: In vitro differentiation of hMSCs into adipocytes, chondrocytes, osteoblasts, and neuronal cells. **A:** *Accumulation of lipid vesicles in adipocytes differentiated from bone marrow-derived hMSCs. The cells show typical characteristics of mature adipocytes, including intracellular lipid vacuoles.* **B:** *Alcian blue staining of cartilage spheroids after in vitro differentiation of hMSCs. Alcian blue stains cartilage extracellular matrix.* **C:** *Alizarin Red S staining of mature osteoblasts after in vitro differentiation of bone marrow-derived hMSCs. Alizarin Red S stains extracellular calcium deposits.* **D:** *Representative image of neurons after in vitro differentiation of bone marrow-derived hMSCs into neurogenic lineages.*

Our variety of blood and immune cell types

The immune system is complex, and studying immunological and hematologic diseases can be challenging. Immune cells, such as macrophages and dendritic cells, are a valuable model for the characterization of the mechanisms contributing to the development of autoimmune diseases, inflammation, and allergies. Immune cells are also ideal for the development of novel therapies to inhibit inflammation, fight infections, or overcome immunosuppression.

Co-cultures of different immune cells and cancer cells can also be used to study the complex interactions between cancer cells and immune cells, as well as to identify new ways to enhance cancer cell killing by immune cells.

$CD34^+$ hematopoietic stem cells are an excellent source of erythrocytes, macrophages, dendritic cells, and lymphocytes. Immune cells can also be isolated from human peripheral blood mononuclear cells (PBMCs). To elevate your immunology research, we offer a wide range of progenitor cells and differentiated blood cells, along with optimized media that mimic their *in vivo* environment or stimulate cell differentiation.

Peripheral blood cells

Human Mononuclear Cells from Peripheral Blood (hMNC-PB)
Cat. No. C-12907
Marker expression:
$CD31^-$ | $CD34^-$
$CD105^+$ | $CD146^+$

Human M1- and M2 Macrophages (GM-CSF/M-CSF)
Cat. No. C-12914/C-12915
Marker expression:
M1: $CD80^+$ | $CD68^+$
M2: $CD163^+$ | $CD68^+$

Human $CD14^+$ Monocytes from Peripheral Blood ($hMoCD14^+$-PB)
Cat. No. C-12909
Marker expression:
$CD14^+$

Umbilical cord blood cells

Human Mononuclear cells from Umbilical Cord Blood (hMNC-CB)
Cat. No. C-12901
Marker expression:
$CD31^-$ | $CD34^-$
$CD105^+$ | $CD146^+$

Human $CD34^+$ Progenitor Cells from Umbilical Cord Blood ($hCD34^+$-CB)
Cat. No. C-12921
Marker expression:
$CD34^+$

Cell types and media overview

Cells	Blood and immune cells	Expansion media	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 xeno-free HPC expansion medium is also available.	✓	✓	
Mononuclear cell culture Mononuclear cells (MNC) represent the lymphocyte and monocyte fraction isolated from fresh umbilical cord blood or peripheral blood.	✓	✓ *	
Monocyte cell culture CD14⁺ monocytes are isolated from fresh peripheral blood by positive selection with over 95% purity.	✓	✓ *	

*short-term maintenance medium for up to 48 hours

Accelerate your cell and gene therapy development

Cell and gene therapies are becoming promising treatment options for several diseases. However, cell and gene therapies are more complex than conventional drugs, and their efficacy and safety may vary depending on many factors.

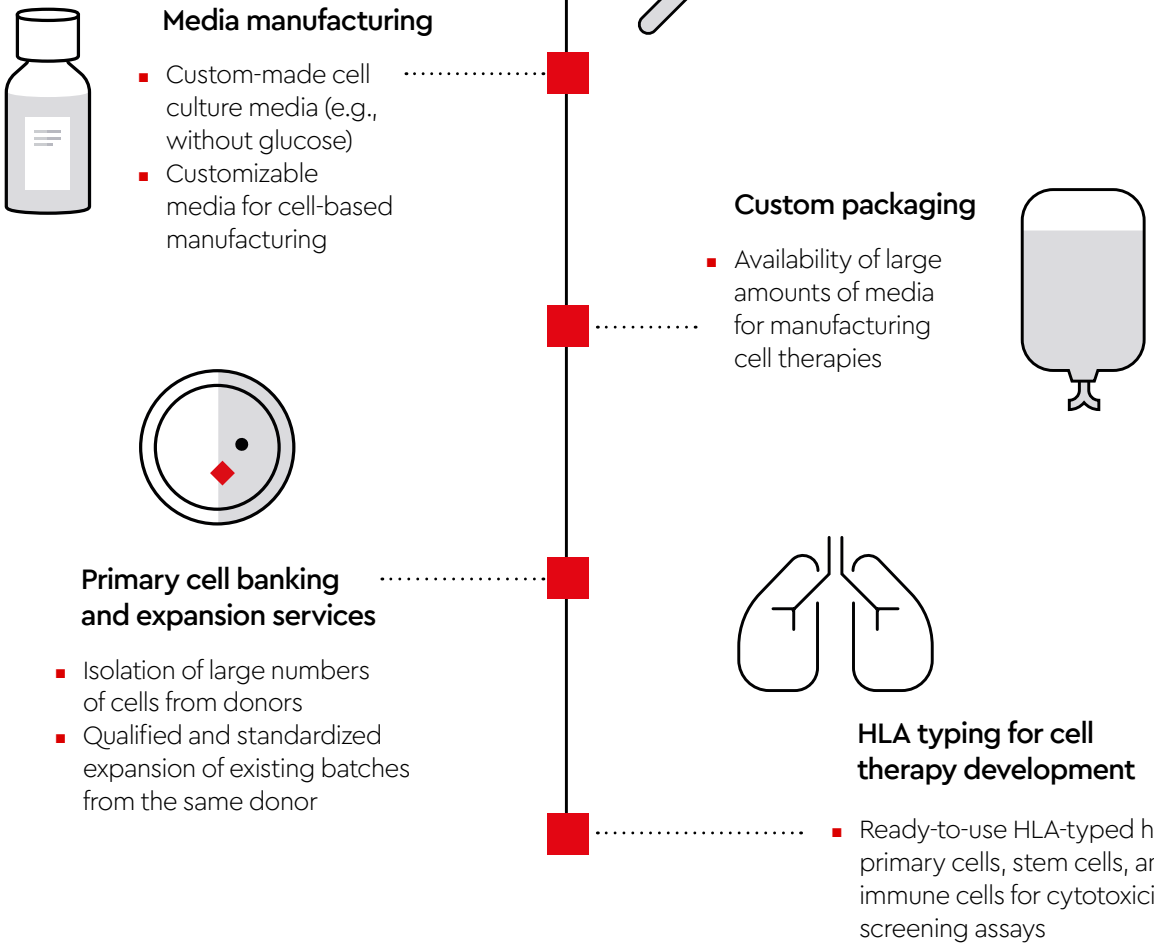
The use of standardized and well-characterized primary cells and optimized cell culture media is key to the success of cell and gene therapies and a requirement by regulatory bodies.

We can help you accelerate your cell and gene therapy development by offering a broad range of standardized cell cultures and customized media. Moreover, we provide scientific and regulatory support at every step in cell and gene therapy development.

Contact us to help you find the cell culture solution that fits your needs and is optimized for your application:

custom.solutions@promocell.com

Discover our customization possibilities



GMP services

- GMP compliant cell culture media and reagents that meet all regulatory requirements

Media manufacturing

- Custom-made cell culture media (e.g., without glucose)
- Customizable media for cell-based manufacturing

Custom packaging

- Availability of large amounts of media for manufacturing cell therapies

Primary cell banking and expansion services

- Isolation of large numbers of cells from donors
- Qualified and standardized expansion of existing batches from the same donor

HLA typing for cell therapy development

- Ready-to-use HLA-typed human primary cells, stem cells, and immune cells for cytotoxicity screening assays


PromoCell GmbH
Heidelberg, Germany
www.promocell.com
PromoCell
Mesenchymal Stem Cell Growth Medium XF
Addition by user: SupplementMix C-39819
Date: _____
Cat. No.: C-28019
Lot No.:
Exp.:
Volume: 450 ml
Store at: +4°C to +8°C
For in vitro research use only.
Not for diagnostic or therapeutic procedures.
500ml
400
300
200
100

Our products

Human primary cell culture products

Primary cells

Cell type	Description	Catalog no.	Marker	Recommended culture media
Cardiac myocytes	Human Cardiac Myocytes (HCM)	C-12810	Sarcomeric α-actinin^{+} Slow muscle myosin^{+}	C-22070
Chondrocytes	Human Chondrocytes (HCH)	C-12710	Differentiation into 3D spheroids tested	C-27101
Endothelial cells (large vessels)	Human Umbilical Vein Endothelial Cells (HUVEC) single donor	C-12200	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22010 C-22011
	Human Umbilical Vein Endothelial Cells (HUVEC) pooled	C-12203	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22010 C-22011
	Human Umbilical Vein Endothelial Cells (HUVEC) isolated in Growth Medium 2, single donor	C-12206	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22011
	Human Umbilical Vein Endothelial Cells (HUVEC) isolated in Growth Medium 2, pooled	C-12208	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22011
	Human Umbilical Vein Endothelial Cells (HUVEC) pre-screened	C-12205	CD31^{+} Dil-Ac-LDL uptake^{+} VEGF response	C-22010 C-22011
	Human Umbilical Artery Endothelial Cells (HUAEC)	C-12202	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22010 C-22011
	Human Aortic Endothelial Cells (HAoEC)	C-12271	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22020 C-22022
	Human Coronary Artery Endothelial Cells (HCAEC)	C-12221	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22020 C-22022
	Human Pulmonary Artery Endothelial Cells (HPAEC)	C-12241	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22010 C-22011
	Human Saphenous Vein Endothelial Cells (HSaVEC)	C-12231	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22010 C-22011
Endothelial cells (microvascular)	Human Dermal Microvascular Endothelial Cells (HDMEC) juvenile foreskin	C-12210	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22020 C-22022
	Human Dermal Microvascular Endothelial Cells (HDMEC) adult donor	C-12212	CD31^{+} Dil-Ac-LDL uptake^{+}	C-22020 C-22022
	Human Dermal Microvascular Endothelial Cells (HDMEC) pre-screened	C-12215	CD31^{+} Dil-Ac-LDL uptake^{+} VEGF response	C-22020 C-22022
	Human Dermal Blood Endothelial Cells (HDBEC) juvenile foreskin	C-12211	Podoplanin^{-} CD31^{+}	C-22020
	Human Dermal Blood Endothelial Cells (HDBEC) adult donor	C-12225	Podoplanin^{-} CD31^{+}	C-22020

Cell type	Description	Catalog no.	Marker	Recommended culture media
Endothelial cells (microvascular)	Human Dermal Lymphatic Endothelial Cells (HDLEC) juvenile foreskin	C-12216	Podoplanin$^+$ CD31$^+$	C-22022
	Human Dermal Lymphatic Endothelial Cells (HDLEC) adult donor	C-12217	Podoplanin$^+$ CD31$^+$	C-22022
	Human Cardiac Microvascular Endothelial Cells (HCMEC)	C-12285	CD31$^+$ Dil-Ac-LDL uptake$^+$	C-22020 C-22022
	Human Pulmonary Microvascular Endothelial Cells (HPMEC)	C-12281	CD31$^+$ Dil-Ac-LDL uptake$^+$	C-22020 C-22022
	Human Uterine Microvascular Endothelial Cells (HUtMEC)	C-12295	CD31$^+$ Dil-Ac-LDL uptake$^+$	C-22020 C-22022
Epithelial cells	Human Nasal Epithelial Cells (HNEpC)	C-12620	Cytokeratin$^+$	C-21060
	Human Tracheal Epithelial Cells (HTEpC)	C-12644	Cytokeratin$^+$	C-21060
	Human Bronchial Epithelial Cells (HBEpC)	C-12640	Cytokeratin$^+$	C-21060
	Human Small Airway Epithelial Cells (HSAEpC)	C-12642	Cytokeratin$^+$	C-21070
	Human Renal Epithelial Cells (HREpC)	C-12665	Cytokeratin$^+$	C-26030
	Human Renal Cortical Epithelial Cells (HRCEpC)	C-12660	Cytokeratin$^+$	C-26030
Fibroblasts	Normal Human Dermal Fibroblasts (NHDF) juvenile foreskin	C-12300	CD90$^+$	C-23010
	Normal Human Dermal Fibroblasts (NHDF) adult donor	C-12302	CD90$^+$	C-23020
	Human Pulmonary Fibroblasts (HPF)	C-12360	CD90$^+$	C-23020
	Human Aortic Adventitial Fibroblasts (HAoAF)	C-12380	CD90$^+$	C-23020
	Human Cardiac Fibroblasts (HCF)	C-12375	CD90$^+$ Smooth muscle α-actin$^-$ Slow muscle myosin$^-$	C-23025
	Human Uterine Fibroblasts (HUF)	C-12385	CD90$^+$	C-23020
Follicle dermal papilla cells	Human Follicle Dermal Papilla Cells (HFDPC)	C-12071	Alkaline phosphatase$^+$	C-26501
Keratinocytes	Normal Human Epidermal Keratinocytes (NHEK) juvenile foreskin, single donor	C-12001	Cytokeratin$^+$	C-20011
	Normal Human Epidermal Keratinocytes (NHEK) juvenile foreskin, pooled	C-12005	Cytokeratin$^+$	C-20011
	Normal Human Epidermal Keratinocytes (NHEK) adult, single donor	C-12003	Cytokeratin$^+$	C-20011

Cell type	Description	Catalog no.	Marker	Recommended culture media
Keratinocytes	Normal Human Epidermal Keratinocytes (NHEK) adult, pooled	C-12006	Cytokeratin$^+$	C-20011
	Normal Human Epidermal Keratinocytes (NHEK) GM3 juvenile foreskin, single donor	C-12011	Cytokeratin$^+$	C-20021
	Normal Human Epidermal Keratinocytes (NHEK) GM3 juvenile foreskin, pooled	C-12015	Cytokeratin$^+$	C-20021
	Normal Human Epidermal Keratinocytes (NHEK) GM3 adult, single donor	C-12013	Cytokeratin$^+$	C-20021
	Normal Human Epidermal Keratinocytes (NHEK) GM3 adult, pooled	C-12016	Cytokeratin$^+$	C-20021
Melanocytes	Normal Human Epidermal Melanocytes (NHEM) juvenile foreskin	C-12400	Mel-5$^+$	C-24010
	Normal Human Epidermal Melanocytes (NHEM) juvenile foreskin cultured in M3 Medium	C-12422	Mel-5$^+$	C-24310
	Normal Human Epidermal Melanocytes (NHEM) adult donor, cultured in M3 Medium	C-12413	Mel-5$^+$	C-24310
Osteoblasts	Human Osteoblasts (HOB)	C-12720	Alkaline phosphatase$^+$ Mineralization tested	C-27001 C-27020
Preadipocytes	Human White Preadipocytes (HWP) subcutaneous	C-12735	Differentiation tested	C-27410 C-27436 C-27438
	Human White Preadipocytes (HWP) visceral	C-12732	Differentiation tested	C-27410 C-27436 C-27438
Skeletal muscle cells	Human Skeletal Muscle Cells (SkMC)	C-12530	Differentiation capacity to multinucleate syncytia tested	C-23060 C-23061
Smooth muscle cells	Human Aortic Smooth Muscle Cells (HAoSMC)	C-12533	Smooth muscle α-actin$^+$ CD31$^-$	C-22062
	Human Coronary Artery Smooth Muscle Cells (HCASMC)	C-12511	Smooth muscle α-actin$^+$ CD31$^-$	C-22062
	Human Pulmonary Artery Smooth Muscle Cells (HPASMC)	C-12521	Smooth muscle α-actin$^+$ CD31$^-$	C-22062
	Human Umbilical Artery Smooth Muscle Cells (HUASMC)	C-12500	Smooth muscle α-actin$^+$ CD31$^-$	C-22062
	Human Tracheal Smooth Muscle Cells (HTSMC)	C-12565	Smooth muscle α-actin$^+$ CD31$^-$	C-22062
	Human Bronchial Smooth Muscle Cells (HBSMC)	C-12561	Smooth muscle α-actin$^+$ CD31$^-$	C-22062
	Human Uterine Smooth Muscle Cells (HUtSMC)	C-12575	Smooth muscle α-actin$^+$ CD31$^-$	C-22062

Cell culture media for expansion and differentiation

Cell type	Product	Size (mL)	Catalog no.
Cardiac myocytes	Myocyte Growth Medium	500	Ready-to-use C-22070 / Kit C-22170
Chondrocytes	Chondrocyte Growth Medium	500	C-27101
Endothelial cells (large vessels)	Endothelial Cell Growth Medium	500	Ready-to-use C-22010 / Kit C-22110
	Endothelial Cell Growth Medium 2	500	Ready-to-use C-22011 / Kit C-22111
Endothelial cells (microvascular)	Endothelial Cell Growth Medium MV	500	Ready-to-use C-22020 / Kit C-22120
	Endothelial Cell Growth Medium MV 2	500	Ready-to-use C-22022 / Kit C-22121
Epithelial cells	Airway Epithelial Cell Growth Medium	500	Ready-to-use C-21060 / Kit C-21160
	Small Airway Epithelial Cell Growth Medium	500	Ready-to-use C-21070 / Kit C-21170
	Air-Liquid Interface Medium (ALI-Airway)	500	C-21080
	Renal Epithelial Cell Growth Medium 2	500	Ready-to-use C-26030 / Kit C-26130
Fibroblasts	Fibroblast Growth Medium	500	Ready-to-use C-23010 / Kit C-23110
	Fibroblast Growth Medium 2	500	Ready-to-use C-23020 / Kit C-23120
	Fibroblast Growth Medium 3	500	Ready-to-use C-23025 / Kit C-23130
Follicle dermal papilla cells	Follicle Dermal Papilla Cell Growth Medium	500	Ready-to-use C-26501 / Kit C-26502
Keratinocytes	Keratinocyte Growth Medium 2	500	Ready-to-use C-20011 / Kit C-20111
	Keratinocyte Growth Medium 3	500	C-20021
Melanocytes	Melanocyte Growth Medium	500	Ready-to-use C-24010 / Kit C-24110
	Melanocyte Growth Medium M2	500	C-24300
	Melanocyte Growth Medium M3	500	C-24310
Osteoblasts	Osteoblast Growth Medium	500	C-27001
	Osteoblast Mineralization Medium	500	C-27020

Cell type	Product	Size (mL)	Catalog no.
Preadipocytes	Preadipocyte Growth Medium	500	Ready-to-use C-27410 / Kit C-27417
	Preadipocyte Differentiation Medium	500	Ready-to-use C-27436 / Kit C-27437
	Adipocyte Nutrition Medium	500	Ready-to-use C-27438 / Kit C-27439
Skeletal muscle cells	Skeletal Muscle Cell Growth Medium	500	Ready-to-use C-23060 / Kit C-23160
	Skeletal Muscle Cell Differentiation Medium	500	C-23061
Smooth muscle cells	Smooth Muscle Cell Growth Medium 2	500	Ready-to-use C-22062 / Kit C-22162

Human stem cell culture products

Human stem and progenitor cells

Cell type	Description	Catalog no.	Marker	Recommended culture media
Human mesenchymal stem cells	Human Mesenchymal Stem Cells from Bone Marrow (hMSC-BM)	C-12974	$CD105^+/CD73^+/CD90^+$ and $CD45^-/CD34^-/CD14^-/CD19^-/HLA\text{-}DR^-$	C-28009 C-28019
	Human Mesenchymal Stem Cells from Umbilical Cord Matrix (hMSC-UC)	C-12971	$CD105^+/CD73^+/CD90^+$ and $CD45^-/CD34^-/CD14^-/CD19^-/HLA\text{-}DR^-$	C-28009 C-28019
	Human Mesenchymal Stem Cells from Adipose Tissue (hMSC-AT)	C-12977	$CD105^+/CD73^+/CD90^+$ and $CD45^-/CD34^-/CD14^-/CD19^-/HLA\text{-}DR^-$	C-28009 C-28019
Hematopoietic progenitor cells	Human $CD34^+$ Progenitor Cells from Cord Blood ($hCD34^+$-CB)	C-12921	$CD34^+$	C-28021 C-39891
Pericytes	Human Pericytes from Placenta (hPC-PL)	C-12980	$CD105^+/CD146^+$ and $CD31^-/CD34^-$	C-28041

Cell culture media for expansion and differentiation

Cell type	Product	Size (mL)	Catalog no.
Human mesenchymal stem cells	Mesenchymal Stem Cell Growth Medium 2 (Ready-to-use)	500	C-28009
	Mesenchymal Stem Cell Growth Medium XF (Ready-to-use)	500	C-28019
	Mesenchymal Stem Cell Adipogenic Differentiation Medium 2 (Ready-to-use)	100	C-28016
	Mesenchymal Stem Cell Chondrogenic Differentiation Medium (Ready-to-use)	100	C-28012
	Mesenchymal Stem Cell Osteogenic Differentiation Medium (Ready-to-use)	100	C-28013
	Mesenchymal Stem Cell Chondrogenic Differentiation Medium w/o Inducers (Ready-to-use)	100	C-28014
	Mesenchymal Stem Cell Neurogenic Differentiation Medium (Ready-to-use)	100	C-28015
Hematopoietic progenitor cells	Hematopoietic Progenitor Expansion Medium XF	500	C-28021
	Cytokine Mix E for 100 ml HPC Expansion Medium XF	1	C-39890
	Cytokine Mix E for 500 ml HPC Expansion Medium XF	5	C-39891
Pericytes	Pericyte Growth Medium 2 (Ready-to-use)	500	C-28041

Human blood and immune cell culture products

Human blood and immune cells

Cell type	Description	Catalog no.	Marker	Recommended culture media
Macrophages	Human M1 Macrophages (GM-CSF), monocyte-derived, single donor (hMDM-GMCSF(-))	C-12914	$CD80^+$ $CD68^+$	C-28055
	Human M2 Macrophages (M-CSF), monocyte-derived, single donor (hMDM-MCSF(-))	C-12915	$CD163^+$ $CD68^+$	C-28056
Monocytes	Human $CD14^+$ Monocytes from Peripheral Blood (hMoCD14$^+$-PB), single donor	C-12909	$CD14^+$	C-28030
Mononuclear cells	Human Mononuclear Cells from Peripheral Blood (hMNC-PB), single donor, ultra-pure	C-12907	Lymphocytes Monocytes Granulocytes	C-28030
	Human Mononuclear Cells from Cord Blood (hMNC-CB), single donor, ultra-pure	C-12901	Lymphocytes Monocytes Granulocytes	C-28030

Cell culture media for expansion and differentiation

Cell type	Product	Size (mL)	Catalog no.
Dendritic cells	DC Generation Medium	250	C-28050
	DC Generation Medium XF	250	C-28052
Macrophages	M1-Macrophage Generation Medium XF	250	C-28055
	M2-Macrophage Generation Medium XF	250	C-28056
Monocytes	Monocyte Attachment Medium	250	C-28051
Mononuclear cells	Mononuclear Cell Medium	500	C-28030

Cancer cell culture prducts

Cancer cell culture media

Product	Size (mL)	Catalog no.
Primary Cancer Culture System	250	C-28081
NCCD Reagent	2	C-43080
3D Tumorsphere Medium XF	250	C-28070
3D Tumorsphere Medium XF (Ready-to-use), phenol red-free	250	C-28075
Cancer Cell Line Medium XF	250	C-28077

Reagents for cell dissociation and cryopreservation

Product	Size (mL)	Catalog no.
DetachKit	30	C-41200
	125	C-41210
	250	C-41220
Macrophage Detachment Solution	250	C-41330
Accutase-Solution	100	C-41310
Cryo-SFM	30	C-29910
	125	C-29912


PromoCell GmbH
Heidelberg, Germany
www.promocell.com
PromoCell
Primary Cancer Cell Medium
D-ACF
Addition by user:
SupplementMix C-39880
Date: _____
Cat. No.: C-28080
Lot No.:
Volume: 240 ml
Exp.:
Store at: +4°C
For in vitro research use only. Not for diagnostic or therapeutic procedures.
250ml
200
150
100
50
PromoCell
2 ml
Store at: -20°C
PromoCell
Cell
Volume: 12.5 ml
Store at: -20°C

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PromoCell GmbH
Sickingenstr. 63/65
69126 Heidelberg
Germany

info@promocell.com
www.promocell.com

USA/Canada
Phone: 1 – 866 – 251 – 2860 (toll free)
Fax: 1 – 866 – 827 – 9219 (toll free)

Deutschland
Telefon: 0800 – 776 66 23 (gebührenfrei)
Fax: 0800 – 100 83 06 (gebührenfrei)

France
Téléphone: 0800 – 90 93 32 (ligne verte)
Téléfax: 0800 – 90 27 36 (ligne verte)

United Kingdom
Phone: 0800 96 03 33 (toll free)
Fax: 0800 169 85 54 (toll free)

Other Countries
Phone: +49 6221 – 649 34 0
Fax: +49 6221 – 649 34 40

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