

Primary Normal Human Cells and Media

In Vivo Relevance. *In Vitro* Results.

Airway Epithelial Cells*

SAEC – Small Airway Epithelial Cells (1 mm bronchiole)
 NHBE – Bronchial/Tracheal Epithelial Cells
 — SAGM™ Small Airway Epithelial Cell Growth Medium
 — BEGM® Bronchial Epithelial Cell Growth Medium
 — B-ALI™ and S-ALI™ Air-liquid Interface Medium

Mammary Epithelial Cells

HMEC – Mammary Epithelial Cells HMEC test positive for cytokeratins 14 and 18, and negative for cytokeratin 19
 — MEGM® Mammary Epithelial Cell Growth Medium

Endothelial Cells*

Large vessels – Aorta, umbilical artery and vein, and coronary, iliac and pulmonary artery
 Small vessels – Dermal, cardiac, lung, single or pooled donors
 — EGM® or EGM® 2 Endothelial Media
 — EGM® 2MV Endothelial Media

Fibroblasts

NHDF-Ad – Adult Dermal Fibroblasts
 AoAF – Aorta Adventitial Fibroblasts
 NHDF-Neo – Neonatal Dermal Fibroblasts
 NHLF – Lung Fibroblasts*
 — FGM® 2 Fibroblast Growth Medium-2
 — FGM® 3 Fibroblast Growth Medium-3
 — SCGM™ Stromal Cell Growth Medium

Keratinocytes*

NHEK-Ad – Adult Epidermal Keratinocytes
 NHEK-Neo – Neonatal Epidermal Keratinocytes Cells from single or pooled donors
 — KGM® Gold Keratinocyte Growth Medium

Melanocytes

NHEM-Neo – Neonatal Epidermal Melanocytes
 NHEM-Ad – Adult Epidermal Melanocytes
 — MGM® 4 Melanocyte Growth Medium-4
 (add ET-3 for adult melanocytes)

Smooth Muscle Cells*

Smooth Muscle Cells are obtained from the aorta, pulmonary artery, major bronchia, umbilical artery, coronary artery, prostate.
 — SmGM® 2 Smooth Muscle Growth Medium-2

Mononuclear Cells

Mononuclear cells are isolated via density gradient separation from peripheral blood (PBMC), bone marrow.
Image provided with kind permission of BioMed Central.

Renal Cells

HRE – Renal Epithelial Cells
 HRCE – Renal Cortical Epithelial Cells
 RPTEC – Renal Proximal Tubule Epithelial Cells*

Skeletal Muscle Cells

HSMM – Skeletal Muscle Myoblasts*
 (post-gestational tissue, quadriceps or psoas)
 — SkGM® 2 Skeletal Muscle Cell Growth Medium-2

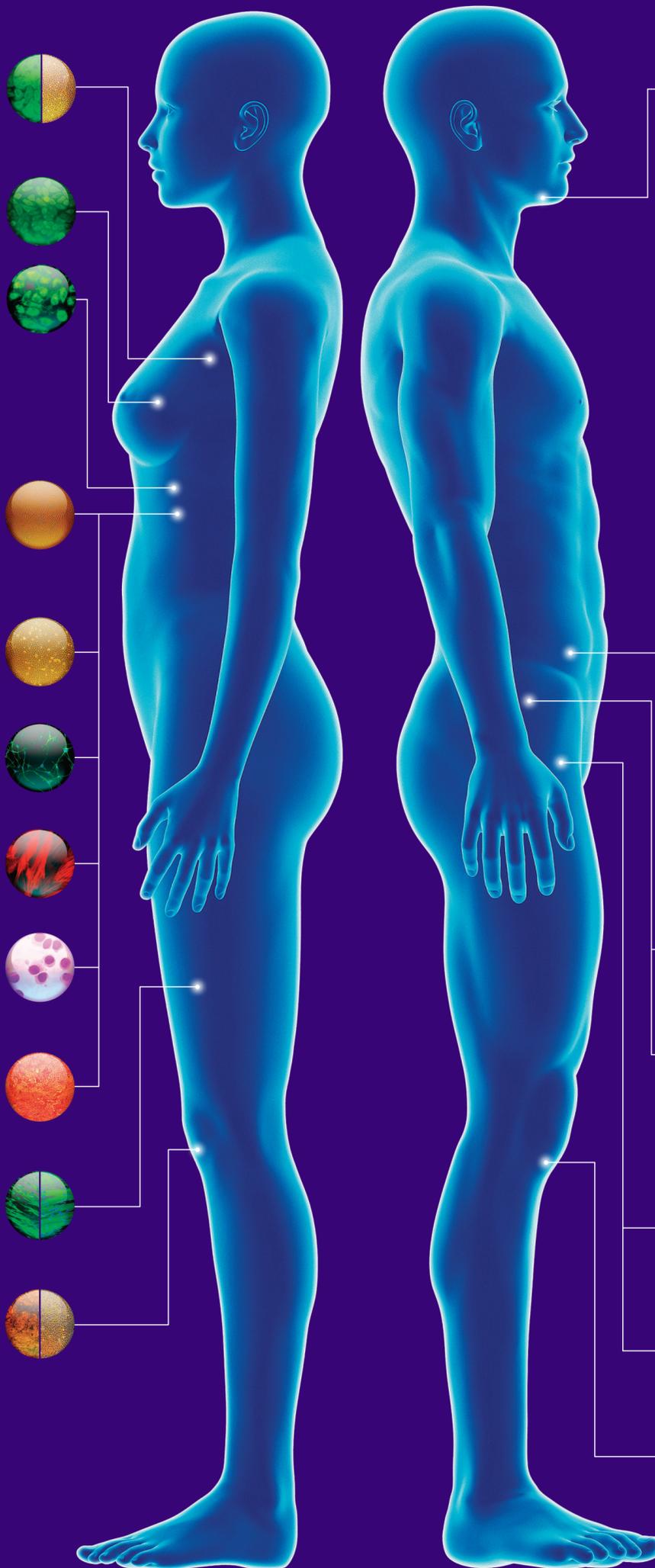
Skeletal Cells

NHOst – Osteoblasts
 NHAC-kn – Articular Chondrocytes (knee)
 — OGM™ Osteoblast Growth Medium
 — OGM™ Differentiation SingleQuots®
 — CGM™ Chondrocyte Growth Medium
 — CDM™ Chondrocyte Differentiation Medium

*Diseased Cells also available

Additional Media

— AGM™ Astrocyte Growth Media
 — PrEGM™ Prostate Epithelial Cell Growth Medium
 — RtEGM™ Retinal Pigment Epithelial Cell Growth Medium
 — SCGM™ Stromal Cell Growth Medium
 — SmGM® 2 Smooth Muscle Growth Medium-2



Dental Pulp Stem Cells

Stem cells harvested from human third molars
 — DPSC Dental Pulp Stem Cell Growth Medium

CD14⁺ Monocytes

Monocytes are isolated from the peripheral blood of screened, healthy donors via CD14⁺ immunomagnetic separation. 90% pure CD14⁺ guarantee.
 — X-VIVO® 15 Serum-free Hematopoietic Cell Medium

CD34⁺ Cells

CD34⁺ cells are available from bone marrow and cord blood, and are isolated via density gradient followed by immunomagnetic separation. 90% pure CD34⁺ guarantee.
 — X-VIVO® 10 Serum-free Hematopoietic Cell Medium

Dendritic Cells

Dendritic cells are differentiated from isolated mononuclear cells by culturing with GM-CSF and IL-4 and are tested for expression of various markers, including CD11c⁺ and CD86⁺.
 — LGM™ 3 Lymphocyte Growth Medium-3 (serum-free medium for lymphocyte cell growth)
 — X-VIVO® 15 Serum-free Hematopoietic Cell Medium

Peripheral Blood Mononuclear Cells (PBMCs)

PBMCs can be used to isolate and differentiate various different cell types, including T cells, monocytes, and dendritic cells.
 — X-VIVO® 15 Serum-free Hematopoietic Cell Medium
Image provided with kind permission of BioMed Central.

T Cells

CD4⁺ and CD8⁺ T cells are isolated from peripheral blood via immunomagnetic separation. 90% pure CD4⁺ guarantee.
 — X-VIVO® 15 Serum-free Hematopoietic Cell Medium

Natural Killer (NK) Cells

NK cells are isolated from peripheral blood of normal donors via positive or negative immunomagnetic separation and tested for various markers, including CD56⁺ and CD16⁺. 90% pure CD56⁺ guarantee.
 — LGM™ 3 Lymphocyte Growth Medium-3 (serum-free medium for lymphocyte cell growth)
 — X-VIVO® 15 Serum-free Hematopoietic Cell Medium

Pancreatic Islets

Pancreatic Islets are made-to-order through Lonza's CellBio Service.

Fresh Bone Marrow

Unprocessed human bone marrow is available from normal donors and can be used to isolate various cell types. Matched bone marrow and peripheral blood from the same donor are also available.

Mesenchymal Stem Cells

Cells are cryopreserved at passage 2, express CD73, CD90, CD105, CD166 and CD44, but not CD14, CD19, CD34, CD45 and HLA-DR, and can successfully differentiate towards adipogenic, chondrogenic and osteogenic lineages
 — MSCGM™ Mesenchymal Stem Cell Growth Medium
 — hMSC Chondrogenic Differentiation Medium
 — hMSC Osteogenic Differentiation Medium
 — hMSC Adipogenic Differentiation Medium

Hepatocytes

Purified hepatocytes are available fresh or cryopreserved. Cryopreserved cells are pre-qualified for plateability and suitability for metabolism studies.
 — HCM™ Hepatocyte Culture Medium
 — HMM Hepatocytes maintenance medium

Preadipocyte Cells*

Subcutaneous preadipocytes
 Visceral preadipocytes
 Matched donor samples are available
 — PGM™ 2 Preadipocyte Growth Medium-2

Osteoclast Precursor Cells

Cells differentiate into mature osteoclasts and then stain positive for TRAP, resorb bone, and express the calcitonin receptor.
 — OCP Osteoclast Precursor Medium

lonza.com/primary

Contact Us

North America
 Customer Service: +1 800 638 8174 (toll free)
order.us@lonza.com
 Scientific Support: +1 800 521 0390 (toll free)
scientific.support@lonza.com

Europe
 Customer Service: +32 87 321 611
order.europe@lonza.com
 Scientific Support: +49 221 99199 400
scientific.support.eu@lonza.com

International
 Contact your local Lonza distributor
 Customer Service: +1301 898 7025
scientific.support@lonza.com

International Offices
 Australia +61 1300 657 508
 Belgium +32 87 321 611
 Brazil +55 11 4028 8000
 China +86 21 6302 8866
 France 0800 91 19 81 (toll free)
 Germany 0800 182 52 87 (toll free)

India +91 124 6052941
 Japan +81 3 6264 0660
 Luxembourg +32 87 321 611
 Singapore +65 6521 4379
 The Netherlands 0800 022 4525 (toll free)
 United Kingdom 0808 234 97 88 (toll free)

For research use only. Not for use in diagnostic procedures.
 All trademarks belong to Lonza, registered in USA, EU or CH or to third party owners and used only for informational purposes. The information contained herein is believed to be correct and corresponds to the latest state of scientific and technical knowledge. However, no warranty is made, either expressed or implied, regarding its accuracy or the results to be obtained from the use of such information and no warranty is expressed or implied concerning the use of these products. The buyer assumes all risks of use and/or handling. Any user must make his own determination and satisfy himself that the products supplied by Lonza Group Ltd or its affiliates and the information and recommendations given by Lonza Group Ltd or its affiliates are (i) suitable for intended process or purpose, (ii) in compliance with environmental, health and safety regulations, and (iii) will not infringe any third party's intellectual property rights. The user bears the sole responsibility for determining the existence of any such third party rights, as well as obtaining any necessary licenses. For more details: www.lonza.com/legal.