## Normal Human Skin Cell Systems and Media

Epidermal Keratinocyte Cells-Neonatal (HEKn)
Epidermal Melanocyte Cells-Neonatal (HEMn)
Dermal Fibroblast Cells-Neonatal (HDFn)
Dermal Fibroblast Cells-Neonatal, Xeno-Free (HDF-XF)
Dermal Microvascular Endothelial Cells-Neonatal (HDMVECn)

Epidermal Keratinocyte Cells-Adult (HEKa)
Epidermal Melanocyte Cells-Adult (HEMa)
Dermal Fibroblast Cells-Adult (HDFa)

Lifeline's Normal Human Skin Cell Systems and optimized Media provide ideal culture models for your critical research of wound healing, skin cancer, burn therapy, dermatological disorders, toxicology, and the screening of cosmetics and skin care products. Additionally, our Xeno-Free Fibroblast cells can be used to establish Xeno-Free human feeder layers for stem cells.

Lifeline's Skin Cells are cryopreserved at the end of primary or secondary culture, or at less than 4 weeks in culture, to ensure the highest viability and plating efficiency. Our Keratinocytes are cultured in serum-free DermaLife™ K Medium. Our Neonatal Melanocytes are cultured in DermaLife M Medium and our Adult Melanocytes are cultured in DermaLife Ma Medium. Our Adult Fibroblasts are cultured in FibroLife™ S2 Medium and our Xeno-Free Fibroblasts are cultured in FibroLife Xeno-Free Medium. Our Neonatal Fibroblasts can be cultured in either FibroLife Serum-Free Medium or FibroLife S2 Medium. Our Dermal Microvascular Endothelial Cells can be cultured in VascuLife® EnGS-Mv Medium or VascuLife VEGF-Mv Medium.

These optimized media support the growth of our skin-derived cells over a period of at least 15 population doublings. Lifeline's cells need not be exposed to PMA, Cholera Toxin, Retinoic Acid, or Phenol Red when cultured in Lifeline culture media. Our Xeno-Free cells and media are free of any animal (non-human) products.



NORMAL HUMAN SKIN CELLS ARE TESTED FOR:	
Cell Count	500,000 cryopreserved cells per vial
Proliferation and Morphology	Normal cell appearance for 15 population doublings Normal cell appearance for 10 population doublings for HEMa
Cell Viability	≥ 70% viability when thawed from cryopreservation
Sterility Testing	Negative for mycoplasma Negative for bacterial and fungal growth
Virus Testing	Negative for HIV-1, HIV-2, HBV, and HCV by PCR
Specific Staining     (Microvascular Endothelial Cells)	Positive for von Willebrand Factor Negative for Smooth Muscle α-Actin

## **Quality Testing for Guaranteed Consistency and Reproducible Results**

Lifeline Cell Technology manufactures products using the highest quality raw materials and incorporates extensive quality assurance in every production run. Exacting standards and production procedures ensure consistent performance.



Call Lifeline Technical Service and Sales at 877.845.7787

Or visit lifelinecelltech.com for more information

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## The Lifeline® Guarantee

Lifeline's rigorous quality control ensures sterility and performance to standardized testing criteria. All donated tissues have been obtained under proper informed consent and adheres to the Declaration of Helsinki, The Human Tissue Act (UK), CFR Title 21, and HIPAA Regulations relative to obtaining and handling human tissue for Research Use. Upon request, Lifeline will provide lot specific QC test results, material safety data sheets, and certificates of analysis. See complete guarantee/warranty statement at lifelinecelltech.com or contact your Lifeline representative for more information.

## **Safety Statement**

This product is <u>For Research Use Only</u>. This product is not approved for human or veterinary use, or for use in *in vitro* diagnostic or clinical procedures.

Lifeline recommends storing cryopreserved vials in liquid nitrogen vapor phase. Handle cryopreserved vials with caution. Always wear eye protection and gloves when working with cell cultures. Aseptically vent any nitrogen from cryopreserved vials in a biosafety cabinet prior to thawing the vials in a water bath. If vials must be stored in liquid phase, the vials should be transferred to vapor phase storage or -80°C for up to 24 hours prior to being thawed.

The Xeno-Free products contain human serum and should be handled as potentially infectious material. While the human serum used in this product has been tested, no known test method can guarantee the absence of Hepatitis B virus, Hepatitis C virus, HIV-1, HIV-2, or other infectious agents. All products which contain or have contacted human blood-based products should be handled as Biosafety Level 2 (cdc.gov) and according to the Bloodborne Pathogen Standard 29 CFR 1910.1030 and should not be recycled.

PRODUCT INFORMATION:	
Part #	Description
FC-0007	Normal Human Epidermal Keratinocyte Cells, Neonatal, Primary - 500,000 cells per vial
FC-0025	Normal Human Epidermal Keratinocyte Cells, Adult, Primary - 500,000 cells per vial
<u>LL-0007</u>	DermaLife™ K Medium Complete Kit - For the culturing of Neonatal and Adult Keratinocyte Cells
FC-0019	Normal Human Epidermal Melanocyte Cells, Neonatal, Secondary - 500,000 cells per vial
FC-0023	Normal Human Epidermal Melanocyte Cells, Neonatal, Primary - 500,000 cells per vial
FC-0089	Normal Human Epidermal Melanocyte Cells, Neonatal, Secondary, Highly Pigmented - 1,000,000 cells per vial
<u>LL-0027</u>	DermaLife M Medium Complete Kit - For the culturing of Neonatal Melanocyte Cells
FC-0030	Normal Human Epidermal Melanocyte Cells, Adult, Secondary - 500,000 cells per vial
FC-0090	Normal Human Epidermal Melanocyte Cells, Adult, Secondary, Highly Pigmented - 1,000,000 cells per vial
<u>LL-0039</u>	DermaLife Ma Medium Complete Kit - For the culturing of Adult Melanocyte Cells
FC-0001	Normal Human Dermal Fibroblast Cells, Neonatal, Primary - 500,000 cells per vial
FC-0024	Normal Human Dermal Fibroblast Cells, Adult, Primary - 500,000 cells per vial
LL-0001	FibroLife™ Serum-Free Medium Complete Kit - For the culturing of Neonatal Fibroblast Cells
LL-0011	FibroLife S2 Medium Complete Kit - For the culturing of Neonatal and Adult Fibroblast Cells
FC-0037	Normal Human Dermal Fibroblast Cells, Neonatal, Xeno-Free, Primary - 500,000 cells per vial
<u>LM-0013</u>	FibroLife Xeno-Free Complete Medium - For the culturing of Neonatal Xeno-Free Fibroblasts
FC-0042	Normal Human Dermal Microvascular Endothelial Cells, Neonatal - 500,000 cells per vial
<u>LL-0004</u>	VascuLife® EnGS-Mv Medium Complete Kit - For the culturing of Microvascular Endothelial Cells
LL-0005	VascuLife VEGF-Mv Medium Complete Kit - For the culturing of Microvascular Endothelial Cells



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