Normal Human Fibroblasts
Specification Sheet

Human Dermal Fibroblasts-Neonatal (HDFn)
Human Dermal Fibroblasts-Neonatal Xeno-Free (HDFn-XF)
Human Dermal Fibroblasts-Adult (HDFa)
Human Bladder Fibroblasts (HBF)
Human Cardiac Fibroblasts (HCF)
Human Gingival Fibroblasts (HGF)
Human Lung Fibroblasts (HLF)
Human Prostate Fibroblasts (HPrF)
Human Scleral Fibroblasts (HScF)
Human Vas Deferens Fibroblasts (HVDF)
Human Uterine Fibroblasts (HUtF)

Fibroblasts (100X): 1) HDFn 2) HDFa 3) HLF 4) HBF

CELL FEATURES:	ISOLATED FROM:	CRYOPRESERVED AT THE END OF:
• HBF	• Human (urinary) bladder	• Secondary Culture*
• HCF	• Human heart tissue	• Secondary Culture*
• HDFn, HDFn-XF§	• Neonatal human foreskin	• Primary Culture*
• HDFa	• Adult human skin	• Primary Culture*
• HGF	• Human gingival tissue	• Secondary Culture*
• HLF	• Human lungs	• Secondary Culture*
• HPrF	• Human prostate	• Tertiary Culture*
• HScF	• Human (ocular) scleral tissue	• Secondary Culture*
• HUtF	• Human uterus	• Secondary Culture*
• HVDF	• Human vas deferens tissue	• Secondary Culture*
• Normal Human Fibroblasts provide an ideal model to study wound healing, toxicology, or basic cell biology.		
• Lifeline's Fibroblasts are suitable for use as feeder layers.		
• Fibroblasts can be grown in Xeno-free conditions when cultured in FibroLife® Xeno-Free Medium.		

NORMAL HUMAN FIBROBLASTS ARE TESTED FOR:	
• Cell Count	500,000 cryopreserved cells per vial
• Proliferation and Morphology	Normal cell appearance for 15 population doublings
• Cell Viability	Minimum 70% viability when thawed from cryopreservation
• Sterility	Negative for mycoplasma, bacterial and fungal growth
• Virus	Negative for HIV-1, HIV-2, HBV, and HCV by PCR

PART NUMBER	DESCRIPTION
FC-0001	HDFn, Normal Human Fibroblasts-Neonatal, Primary – 500,000 cells per vial
FC-0024	HDFa, Normal Human Fibroblasts-Adult, Primary – 500,000 cells per vial
FC-0049	HLF, Normal Human Lung Fibroblasts, Secondary – 500,000 cells per vial
FC-0050	HBF, Normal Human Bladder Fibroblasts, Secondary – 500,000 cells per vial
FC-0052	HVDF, Normal Human Vas Deferens Fibroblasts, Secondary – 500,000 cells per vial
FC-0060	HCF, Normal Human Cardiac Fibroblasts, Secondary – 500,000 cells per vial
FC-0076	HUtF, Normal Human Uterine Fibroblasts, Secondary – 500,000 cells per vial
FC-0095	HGF, Normal Human Gingival Fibroblasts, Secondary – 500,000 cells per vial
FC-0098	HScF, Normal Human Scleral Fibroblasts, Secondary – 500,000 cells per vial
FC-0099	HPrF, Normal Human Prostate Fibroblasts, Tertiary – 500,000 cells per vial
LL-0001	FibroLife Serum-Free Medium Complete Kit (FibroLife Basal Medium, FibroLife Serum-Free LifeFactors® Kit)
LL-0011	FibroLife S2 Medium Complete Kit (FibroLife Basal Medium, FibroLife S2 LifeFactors Kit)
LS-1104	GA Antimicrobial Supplement, 0.5 mL (Gentamicin 30 mg/mL, Amphotericin B 15 µg/mL); provided with purchase of LL-0001, or LL-0011
FC-0037	HDFn-XF, Normal Human Dermal Fibroblasts-Neonatal, Xeno-Free§, Primary – 500,000 cells per vial
LM-0013	FibroLife Xeno-Free Complete Medium

To place an order, please visit lifelinecelltech.com or call technical and customer service at 877.845.7787.

Lifeline's Normal Human Fibroblasts

Lifeline's Normal Human Fibroblasts provide an ideal cell system to establish serum free human feeder layers for human embryonic stem cell cultures or as a model to study wound healing, toxicology or basic cell biology.

Lifeline's human fibroblast cells are cryopreserved at the earliest possible passage to ensure the highest viability, purity, and plating efficiency. Our fibroblasts are quality tested in FibroLife® S2 or FibroLife Xeno-Free§ Medium to ensure proper growth and morphology over a period of at least 15 population doublings.

Lifeline's fibroblasts are not exposed to antimicrobials or phenol red when cultured in the respective Lifeline® medium. Lifeline offers antimicrobials and phenol red; however they are not required for eukaryotic cell proliferation. A vial of Gentamicin and Amphotericin B (GA; LS-1104) is provided with the purchase of FibroLife Serum-Free (LL-0001), or FibroLife S2 (LL-0011) Medium Complete Kits for your convenience. The use of GA is recommended to inhibit potential fungal or bacterial contamination of eukaryotic cell cultures. Phenol Red (LS-1009) may be purchased, but is not required.

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.

The Lifeline Guarantee

Lifeline's rigorous quality control ensures sterility and performance to standardized testing criteria. 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.

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.

Safety Statement

This product is for Research Use Only. This product is not approved for human or veterinary use or for use in *in vitro* diagnostics 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 liquid nitrogen from cryopreserved vials by carefully loosening the vial cap 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.

**Lifeline Technical Note: There are different and often contradictory terminologies used by cell culture companies to define the passage number of cells. Lifeline's designation of 'primary cells' are cells that have been isolated from tissue, plated onto culture vessels, expanded, harvested and cryopreserved. The term 'secondary' indicates that the cells have been isolated, plated and expanded in culture vessels twice before being harvested for cryopreservation.*

§Lifeline documents that all materials used in the manufacture of products which are labeled 'Xeno-Free' have never come into contact with material of animal (non-human) origin and are not of animal (non-human) origin. FibroLife Xeno-Free Complete Medium contains human serum. For more information, please see the product-specific specification sheets for HDFn-XF and FibroLife Xeno-Free Complete Medium.

Call Lifeline Technical Service and Sales at 877.845.7787

or visit lifelinecelltech.com for more information

Lifeline Cell Technology – 8415 Progress Drive, Suite T – Frederick, MD 21701