Normal Human Smooth Muscle Cells (HSMC)
Specification Sheet

Human Aortic Smooth Muscle Cells (HAoSMC)
Human Pulmonary Artery Smooth Muscle Cells (HPASMC)
Human Coronary Artery Smooth Muscle Cells (HCASMC)
Human Lung Smooth Muscle Cells (HLSMC)

Lifeline's normal HSMC, when grown in Lifeline's VascuLife® SMC Medium, provide an ideal low serum (5%) culture model for the study of angiogenesis, atherosclerosis, diabetes or vascular/pulmonary biology.

Lifeline's HSMC are cryopreserved as secondary cells* to ensure the highest viability, purity and plating efficiency. Our HSMC are quality tested in VascuLife SMC Medium and demonstrate optimal low serum growth over a period of at least 15 population doublings at rates equal to or greater than other serum-supplemented media. Lifeline's HSMC are not exposed to antimicrobials or phenol red when cultured in VascuLife SMC Medium; an advantage since these supplements can cause cell stress and "masking effects" that may negatively impact experimental results. Lifeline offers these traditional supplements; however they are not needed, or recommended, to achieve optimal cell performance in most research applications.

CELL FEATURES:
• HSMC are cryopreserved as secondary cells, e.g. cells are isolated from the stated tissue and expanded in culture vessels twice before cryopreservation. • HAoSMC are isolated from human aorta (ascending and/or descending). • HPASMC are isolated from human pulmonary artery. • HCASMC are isolated from human coronary arteries. • HLMSC are isolated from the lobes of the lungs.
• HSMC can be grown without phenol red or antimicrobials when cultured in VascuLife SMC Medium.
• HSMC are extensively tested to meet quality standards and exhibit optimal performance.
• Lifeline guarantees performance and quality.

NORMAL HUMAN VASCULAR SMOOTH MUSCLE CELLS ARE TESTED FOR:	
• Cell Count	500,000 cryopreserved cells per vial
• Proliferation and Morphology	Normal cell appearance for 15 population doublings
• Cell Viability	Minimum 50% 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	von Willebrand Factor negative Smooth muscle α-actin positive after differentiation

**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.*

For orders and customer support in Europe:
CellSystems Biotechnologie Vertrieb GmbH . Langeler Ring 5 . 53842 Troisdorf, Germany
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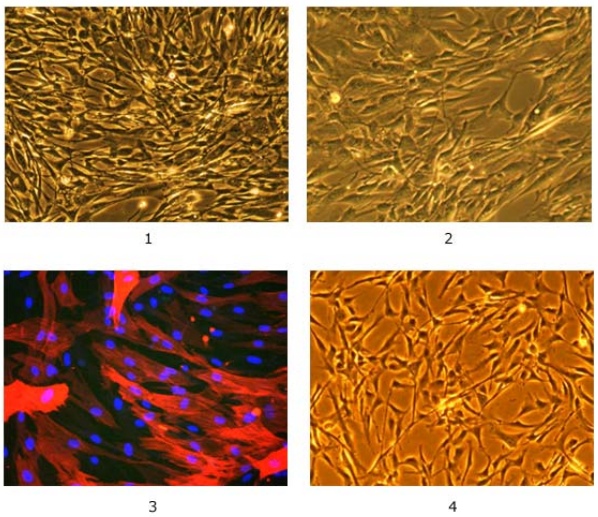
Quality Testing for Guaranteed Consistency and Reproducible Results

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

The Lifeline® Guarantee

Lifeline's rigorous quality control ensures sterility and performance to standardized testing criteria. All cells have been obtained under proper informed consent. If Lifeline's products do not meet our posted performance and quality standards, we will replace them at no charge or provide a full refund. Upon request, CellSystems® 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 CellSystems® representative for more information.



Smooth muscle cells, 100X 1) HAoSMC 2) HPASMC 3) Lung SMC immunostained for smooth muscle α-actin (red), nuclei stained with Hoechst (blue) 4) HCASMC

Safety Statement

This product is For Research Use Only and is not approved for human or veterinary use, or for use in *in vitro* diagnostic or in 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.

PRODUCT INFORMATION:	
Part #	**Description**
FC-0015	HAoSMC, Normal Human Aortic Smooth Muscle Cells, Secondary – 500,000 cells per vial
FC-0031	HCASMC, Human Coronary Artery Smooth Muscle Cells, Secondary – 500,000 cells per vial
FC-0056	HPASMC, Human Pulmonary Artery Smooth Muscle Cells, Secondary – 500,000 cells per vial
FC-0046	HLMSC, Human Lung Smooth Muscle Cells, Secondary – 500,000 cells per vial
LL-0014	VascuLife® SMC Complete Kit (VascuLife Basal Medium, VascuLife SMC LifeFactors® Kit)

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