

Product Description

In vascular adventitia, the outermost connective tissue covering the vessel, adventitial fibroblasts (AF) produce collagen to provide structural support by anchoring the blood vessel to nearby tissues. AF are the first cells of the vascular wall to respond to hypertension and vascular injury through activation and proliferation [1]. During pathological conditions, AF produce cytokines and chemokines to induce mass infiltration of immune cells into the adventitial layer of the vessel wall. Immune cell infiltration into the adventitia results in adventitial inflammation and can lead to cardiovascular disease [2, 3]. The important properties of AF make AF cultures an ideal tool for studying the pathogenesis of cardiovascular disease and for the development of novel disease treatments. They are also often used for the examination of fibroblast disorders like fibrosis or other diseases linked to either imperfect or excessive accumulation of fibroblasts.

iXCells Biotechnologies provides high quality Human Aortic Adventitial Fibroblasts (HAAF), which are isolated from human aortic artery and cryopreserved at P1, with >0.5 million cells in each vial. HAAF are characterized by spindle morphology and express fibronectin. They are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi and can further expand for 12 population doublings in Fibroblast Growth Medium (Cat# MD-0011) under the condition suggested by iXCells Biotechnologies.

Product Details

Tissue	Human aortic artery
Package Size	0.5 million cells/vial
Passage Number	P1
Shipped	Cryopreserved
Storage	Liquid nitrogen
Growth Properties	Adherent
Media	Fibroblast Growth Medium (Cat# MD-0011)

References

- [1] Conrad, G. W., Hart, G. W., Chen, Y. (1977) Differences in vitro between fibroblast-like cells from cornea, heart, and skin of embryonic chicks. *J. Cell Sci.* 26:119-137.
- [2] Pendurthi, U. R., Rao, L. V. M., Williams, J. T. and Idell, S. (1999) Regulation of tissue factor pathway inhibitor expression in smooth muscle cells. *Blood* 94:579-586.
- [3] Das M, Dempsey EC, Reeves JT, Stenmark KR. (2002) Selective expansion of fibroblast subpopulations from pulmonary artery adventitia in response to hypoxia. *Am J Physiol Lung Cell Mol Physiol* 282(5):L976-86.

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