

## Product Description

Human cardiac fibroblasts (HCF) provide structural support for cardiac myocytes and are responsible for extracellular matrix synthesis in the heart during growth and pathophysiological conditions. HCF are an important cellular component of myocardial responses to injury and the source of paracrine growth factors. HCF proliferation and synthesis of matrix is essential for scar formation at sites of myocardial infarction [1] and cardiac fibrosis (*Lasix*)[2]. Primary HCF cultures have been widely used as a model to study many aspects of human heart function and pathophysiology. [3].

iXCells Biotechnologies provides high quality HCF, which are isolated from human heart and cryopreserved at P1, with >0.5 million cells in each vial. HCF express fibronectin and are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast, and fungi. They can further expand for 16 population doublings in **Fibroblast Growth Medium (Cat# MD-0011)** under the condition suggested by iXCells Biotechnologies.

## Product Details

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

## References

- [1] Sabri, A., Short, J., Guo, J., Steinberg, S. F. (2002) Protease-activated receptor-1-mediated DNA synthesis in cardiac fibroblast is via epidermal growth factor receptor transactivation: distinct PAR-1 signaling pathways in cardiac fibroblasts and cardiomyocytes. *Circ. Res.* 91:532-9.
- [2] Akiyama-Uchida, Y. et al., (2002) Norepinephrine enhances fibrosis mediated by TGF-beta in cardiac fibroblasts. *Hypertension* 40:148-54.
- [3] Burgess, M. L., Terracio, L, Hirozane, T., Borg, T. K. (2002) Differential integrin expression by cardiac fibroblasts from hypertensive and exercise-trained rat hearts. *Cardiovasc Pathol* 11(2):78-87.

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