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Human Cardiac Fibroblasts: HCF

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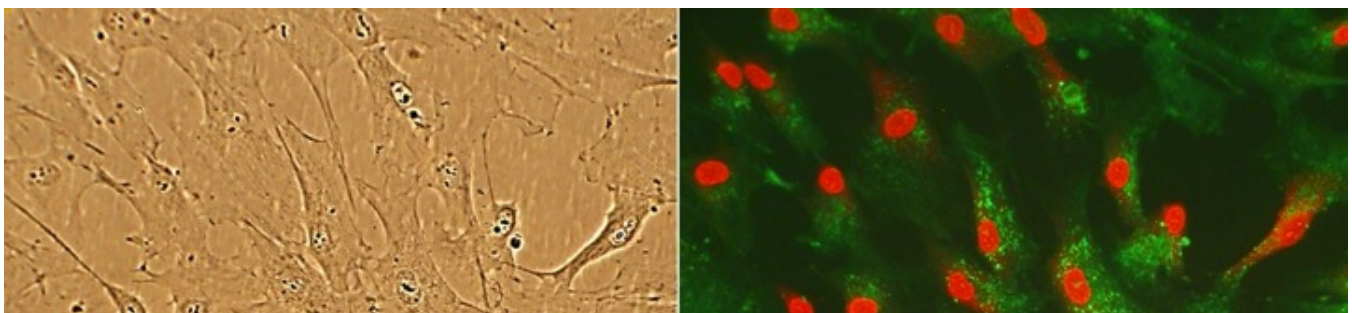
Cell Applications Inc Brochure

Description

Human Cardiac Fibroblasts (HCF) are the most prevalent cell type in the heart. HCF from Cell Applications, Inc. provide an excellent model system to study many aspects of human heart function and pathophysiology.

HCF from Cell Applications, Inc. have been utilized in a numerous published studies, for example to:

- Determine that electrical coupling between cardiomyocytes and fibroblasts is mediated by Ca^{2+} -activated K^{+} channels that can be stimulated by estrogen receptor agonists
- Show that antimitogenic effects of estradiol on HCF growth are mediated by cytochromes and metabolites
- Demonstrate that in response to mechanical stretch, cardiac fibroblasts release TGF- β that downregulates thrombomodulin, increases thromboembolism and induces cardiac fibroblast differentiation into myofibroblasts
- Indicate that activation of G protein-coupled receptor kinase-2 prevents normal regulation of collagen synthesis in cardiac fibroblasts mimicking heart failure phenotype
- Identify FGF2 signaling pathway as potential target for modulating apoptosis in cardiac pathology
- Investigate the roles of scleraxis and AMPK β 1 in scar formation following myocardial infarction
- Show that the KATP channel opener KMUP-3 preserved cardiac function after myocardial infarction by enhancing the expression of NO synthase and restoring MMP-9/TIMP-1 balance



^[1]
(Click to Enlarge) **Human Cardiac Fibroblasts: HCF (L)**. HCF immunolabeled for FSP (green), nuclei are stained with PI (R).

Details

Tissue	Normal healthy human heart tissue
QC	No bacteria, yeast, fungi, mycoplasma, virus
Bioassay	Attach, spread, proliferate in Growth Med
Cryovial	500,000 HCF (1st passage) frozen in Basal Medium w/ 10% FBS, 10% DMSO
Kit	Cryovial frozen HCF (306A-05a, adult atrium; 306V-05a, adult ventricle; or 306-05f fetal) , Growth Medium (316-500), Subcltr Rgnt Kit (090K)
Proliferating	Shipped in Gr Med, 2nd psg (flasks or plates)
Doublings	At least 8
Applications	Laboratory research use only (RUO). Not for human, clinical, diagnostic or veterinary use.

Instructions HCF

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