

## **Human Dermal Fibroblasts-adult**

### **Description**

Fibroblasts are mesenchymal cells derived from the embryonic mesoderm. They have been extensively used for a wide range of cellular and molecular studies. This is mainly because they are one of the easiest types of cells to grow in culture, and their durability makes them amenable to a wide variety of manipulations ranging from studies employing gene transfection to microinjection. There is good evidence that fibroblasts in different parts of the body are intrinsically different. Fibroblasts within tissues are exposed to a dynamic mechanical environment, which influences the structure integrity of both healthy and healing soft tissue. Fibroblasts secrete a nonrigid extracellular matrix that is rich in type I and/or type III collagen. In addition, dermal fibroblasts also secrete large quantities of hyaluronan in response to inflammatory stimuli. During wound healing, dermal fibroblasts switch from a migratory, repopulating phenotype to a contractile, matrix-reassembling phenotype.

HDF-a are isolated from adult human skin. HDF-a are cryopreserved at primary culture and delivered frozen. Each vial contains  $>5 \times 10^5$  cells in 1 ml volume. HDF-a are characterized by their spindle morphology and immunofluorescent method with antibody to fibronectin. HDF-a are negative for HIV-1, HBV, HCV, mycoplasma, bacteria, yeast and fungi. HDF-a are guaranteed to further expand for 15 population doublings at the condition provided by Creative Bioarray.

### **Quality Control**

Human Primary Dermal Fibroblasts are tested for negative expression of von Willebrand Factor Expression/Factor VIII, cytokeratin 18, and alpha smooth muscle actin. Human Primary Dermal Fibroblasts are negative for bacteria, yeast, fungi and mycoplasma. Cells can be expanded for 3-5 passages at a split ratio of 1:2 or 1:3 under the cell culture conditions specified by Creative Bioarray. Repeated freezing and thawing of cells is not recommended.

### **Storage and Shipping**

We ship frozen cells on dry ice. On receipt, immediately transfer frozen cells to liquid nitrogen ( $-180^{\circ}\text{C}$ ) until ready for experimental use. Live cell shipment is also available on request. Never can primary cells be kept at  $-20^{\circ}\text{C}$ .

### **Application**

Human Primary Dermal Fibroblasts can be used for the assay of cell-cell interaction, adhesion, PCR, Western blot, immunoprecipitation, immunofluorescent flow cytometry, or generating cell derivatives for desired research applications.

