

Thermostable Recombinant Human Basic Fibroblast Growth Factor (t-bFGF)

CAT. NO. t-bFGF-50a

INTRODUCTION

Human basic Fibroblast Growth Factor (bFGF) is a single-chain polypeptide growth factor that plays a significant role in the process of wound healing and is a potent inducer of angiogenesis. bFGF has been shown to support the maintenance of undifferentiated human embryonic stem cells. It also stimulates the proliferation of all cells of mesodermal origin, and many cells of neuroectodermal, ectodermal and endodermal origin. bFGF is a chemotactic and mitogenic agent for endothelial cells in vitro and induces neural differentiation, survival and regeneration. It has been shown to be crucial in modulation of angiogenesis, tissue repair, embryonic development and neuronal function in vivo.

DESCRIPTION

The engineered thermostability enhanced bFGF (t-bFGF) is a modified human recombinant bFGF protein produced in eukaryotic algae, *Chlamydomonas reinhardtii*. The t-bFGF protein is purified by proprietary chromatographic techniques.

APPLICATION

Human embryonic stem cell and various other stem cell line such as mesenchymal stem (stroma) cell (MSC) culture.

SOURCE

Green algae *Chlamydomonas reinhardtii*

SIZE

10 µg, 50 µg, 100 µg

FORMULATION

Aqueous buffer containing sodium phosphate and sodium chloride, pH6.5-7.5

STORAGE TEMPERATURE

-20°C

ENDOTOXIN

≤0.005 EU/µg by the LAL method

PURITY

>95% by SDS-PAGE.

ACTIVITY

The ED50 for supporting the proliferation of MSCs was determined by comparison to a standard bFGF with ED50 of 0.1-0.6 ng/mL. ED50 of algal expressed t-bFGF was found lower than the standard 0.1-0.6 ng/mL.

The t-bFGF shows no significant loss of activity after 3 days at 37°C, as determined by PERK assays.

