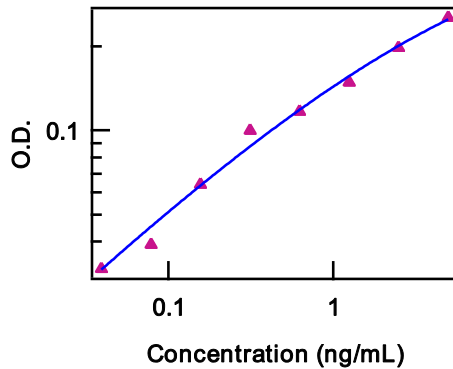


Human FGF basic (FGF-2) Recombinant Protein

Catalog Number: 14-8986

Also known as: FGF basic 147, fibroblast growth factor beta

RUO: For Research Use Only. Not for use in diagnostic procedures.



Human FGF basic Recombinant Protein bioactivity measured by mouse BALB/c 3T3 cell proliferation assay.

Product Information

Contents: Human FGF basic (FGF-2) Recombinant Protein

REF **Catalog Number:** 14-8986

Concentration: 0.1 mg/mL

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment

Source: E.coli derived amino acids Pro143-Ser288 accession number NM_002006

Molecular Mass: 20 kDa

Purity: Greater than or equal to 98%, as determined by SDS-PAGE

Endotoxin: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED50 of this protein, as measured by balb/c-3T3 cell proliferation, is 0.1-1.25 ng/mL. This corresponds to a specific activity of 1×10^7 - 8×10^5 Units/mg.

Formulation: Sterile liquid; phosphate buffered saline, 1 mM DTT, 1% BSA, pH 7.2. 0.22 μ m filtered.

Temperature Limitation: Store at less than or equal to -70°C.

Batch Code: Refer to vial

Use By: Refer to vial



Description

Fibroblast Growth Factor basic (FGF-b, also known as FGF-2) is a member of the FGF family, a highly conserved family of 16-34 kDa heparin-binding proteins. FGF-b exists in several isoforms, and although they are equally active, only the 18 kDa form is secreted while the 23 kDa form localizes to the nucleus. They share four common tyrosine kinase receptors, FGFR 1-4, and require the binding of a second surface protein, the ubiquitously expressed heparan sulfate proteoglycan, in order to fully activate these receptors. FGF family members affect the proliferation, differentiation, mobility, and survival of several cell types, including fibroblasts, osteoblasts, smooth muscle cells, and neuroblasts. FGF-b expression has been detected in several cell types, including fibroblasts, macrophages, endothelial cells, epithelial cells, and neurons. It lacks the signal sequence peptide necessary for the ER/Golgi pathway, indicating that secretion occurs via an alternate pathway. They are particularly important in embryonic development as triggers of neurogenesis, angiogenesis, and neovascularization. FGF-b has most recently been studied for its ability to maintain the proliferation of embryonic stem cell cultures in an undifferentiated state. Some members of the family, including FGF-b, remain active during adulthood and play a role in bone formation and tissue repair. FGF family members are also implicated in many types of cancer and may contribute to tumor vascularization.

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Catalog Number: 14-8986

Also known as: FGF basic 147, fibroblast growth factor beta

RUO: For Research Use Only. Not for use in diagnostic procedures.

Applications Reported

Human FGF basic recombinant protein is biologically active.

Applications Tested

The ED₅₀ of this protein, as measured by balb/c-3T3 cell proliferation, is 0.1-1.25 ng/mL. This corresponds to a specific activity of 1×10^7 - 8×10^5 Units/mg.

References

Greber B, Lehrach H, Adjaye J. Fibroblast growth factor 2 modulates transforming growth factor beta signaling in mouse embryonic fibroblasts and human ESCs (hESCs) to support hESC self-renewal. *Stem Cells*, 2007 Feb; 25(2): 455-64.

Dvorak P, Hampl A. Basic fibroblast growth factor and its receptors in human embryonic stem cells. *Folia Histochem Cytobiol.* 2005; 43(4): 203-8.

Ornitz DM, Itoh N. Fibroblast growth factors. *Genome Biol.* 2001; 2(3)

Related Products

14-8351 Mouse VEGF120 Recombinant Protein

14-8359 Human VEGF 121 Recombinant Protein

14-8981 Mouse FGF acidic (FGF-1) Recombinant Protein

14-8987 Human FGF acidic (FGF-1) Recombinant Protein

14-8988 Human EGF Recombinant Protein

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