

Cytokines

Human Recombinant FGF-5



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Fibroblast growth factor 5

Catalog # 78182
78182.1

50 µg
100 µg

Product Description

Fibroblast growth factor 5 (FGF-5) is a secreted, heparin-binding member of the FGF subfamily. FGFs possess broad mitogenic and cell survival activities and are expressed during embryonic development. FGF-5 is expressed in the mesenchyme and central nervous system, and in skeletal muscles and hair follicles. FGF-5 promotes cell differentiation and proliferation by binding FGF receptor 1 and FGF receptor 2 (FGFR1 and FGFR2, respectively). FGF-5 plays an important regulatory role in skeletal muscle development. FGF-5 has also been identified in neurons of the limbic system, especially those of the olfactory bulb and pyramidal cells of the hippocampus (Haub & Goldfarb).

Product Information

Alternative Names: Fibroblast growth factor 5, HBGF-5, Heparin-binding growth factor 5, Smag-82
Accession Number: P12034
Amino Acid Sequence: MAWAHGEKRL APKGQPGPAA TDRNPIGSSS RQSSSSAMSS SSASSSPAAS LGSQGSGLLEQ SSFQWSPSGR RTGSLYCRVG IGFHLQIYPD GKVNGSHEAN MLSVLEIFAV SQGIVGIRGV FSNKFLAMSK KGKLHASAKF TDDCKFRERF QENSYNTYAS AIHRTEKTGR EWYVALNKRK KAKRGCSRVV KPQHISTHFL PRFKQSEQPE LSFVTVPEK KNPPSPIKSK IPLSAPRKNT NSVKYRLKFR FG
Predicted Molecular Mass: 27.7 kDa
Species: Human
Cross Reactivity: Reported to be species-specific
Formulation: Lyophilized from a sterile-filtered solution containing sodium phosphate and sodium chloride, pH 7.5.
Source: E. coli

Specifications

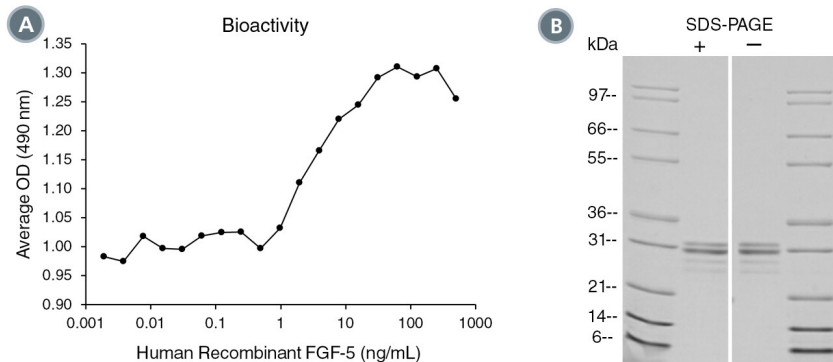
Activity: The specific activity is $\geq 1.0 \times 10^5$ units/mg ($EC_{50} \leq 10$ ng/mL) as determined by a cell proliferation assay using NR6R-3T3 cells in the presence of 1 µg heparin.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage: Store at -20°C to -80°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Bring vial and sterile water to room temperature (15 - 25°C). Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Let solution sit for 1 minute at room temperature (15 - 25°C). If precipitate is observed, centrifuge at 16,000 x g for 1 minute. Remove supernatant and transfer to a new tube, taking care not to disturb the pellet. Discard the pellet. A 10% overfill has been added to compensate for any loss of protein in the precipitate.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant FGF-5 was tested by its ability to promote proliferation of NR6R-3T3 cells in the presence of 1 μ g heparin. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the example above is 3.11 ng/mL.

(B) 1 μ g of Human Recombinant FGF-5 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-5 has a predicted molecular mass of 27.7 kDa.

Related Products

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References

Haub O & Goldfarb M. (1991) Expression of the fibroblast growth factor-5 gene in the mouse embryo. *Development* 112(2): 397–406.

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