Human FGF-basic, cct-premium, FGF-2

Human Fibroblast Growth Factor-basic, recombinant, cct-premium

Synonyms: FGF2, BFGF, FGFB, HBGF-2, basic Fibroblast growth factor (bFGF), Heparin binding growth factor-2, Prostatropin.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
10 µg	1370.950.010		
50 µg	1370.950.050		
100 µg	1370.950.100		
200 µg	1370.950.200		
500 µg	1370.950.500		
1 mg	1370.950.199		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant human Fibroblast Growth Factor-basic (hFGF-b) is a 16.5 kDa protein containing 153 amino acid residues. Interestingly, hFGF-b contains no hydrophobic leader sequence previously thought to be required for cell secretion. Basic FGF bears 55% homology to acidic FGF and also seems to exist in three forms: the 154 amino-acid form and two other truncated versions of 146 and 131 amino acids lacking the N-terminal 9 and 24 residues. hFGF-b is a heparin binding growth factor which stimulates the proliferation of a wide variety of cells including mesenchymal, neuroectodermal and endothelial cells. It also exerts a potent angiogenic activity in vivo. Acidic and basic FGF compete for the binding to 125 kDa and 145 kDa receptor species. However, acidic FGF has a higher affinity for the 125 kDa species, while basic FGF has a higher affinity for the 145 kDa species. FGF receptor activation leads to the activation of MAP kinase and protein kinase C. In general FGF's induce the proliferative response in cells derived from mesoderm and neuroectoderm. It seems that basic FGF reduces the average doubling time by shortening the G1 phase of the cell cycle. Furthermore, it has been reported to induce the release of plasminogen activator by endothelial cells. One of the most potentially significant applications of FGF-b is related to its reported ability to induce angiogenesis.

- **Biological Activity** ≥ 1 x 10^7 IU/mg
- **Source** *E. Coli*
- **Purity** ≥ 98 % (SDS-PAGE, silver stained)
- **Endotoxin level** ≤ 0.01 ng/µg of protein (≤ 0.1EU/µg)
- **Stabilizer** None
- **Buffer** PBS*
- **Physical state** Sterile filtered, lyophilized

Biological Activity

The ED_{50} of ≤ 0.1 ng/ml was determined by stimulation of cell proliferation in HUVEC (human umbilical vein endothelial cells) in direct Comparison with WHO standard #90/712. It corresponds to a specific activity of ≥ 1.0 x 10^7 IU/mg.

Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration at least 0.05 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week or in working aliquots at -20°C to -80°C. Working aliquots should be at the highest practical concentration. For long term storage we recommend to add at least 0.1% HSA (order number: 2835.955.xyz or 2835.958.xyz) or BSA (order number: 2835.919.xyz).

Stability

Lyophilized samples are stable until expiry date at -20°C to -80°C. FGF-basic can be stored in high-salt buffer (PBS, 1M NaCl) at 4°C for 2-4 weeks. Please avoid repeated freeze-thaw cycles.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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Amino Acid Sequence

AGSITTLPAL PEDGGSGAFP PGHFKDPKRL YCKNGGFFLR IHPDGRVDGV REKSDPHIKL QLQAEERGVV SIKGVCANRY LAMKEDGRLL ASKCVTDECF FFERLESNNY NTYRSRKYTS WYVALKRTGQ YKLGSKTGPG QKAILFLPMS AKS

SDS-PAGE and Biological Activity of FGF-basic, cct-premium

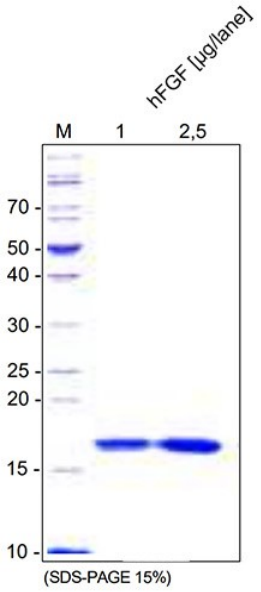

***Fig. 1**: SDS-PAGE analysis of recombinant human FGF-basic, cct-premium. Samples were loaded in 15% SDS-polyacrylamide gel under reducing and non-reducing condition and stained with Coomassie blue.*

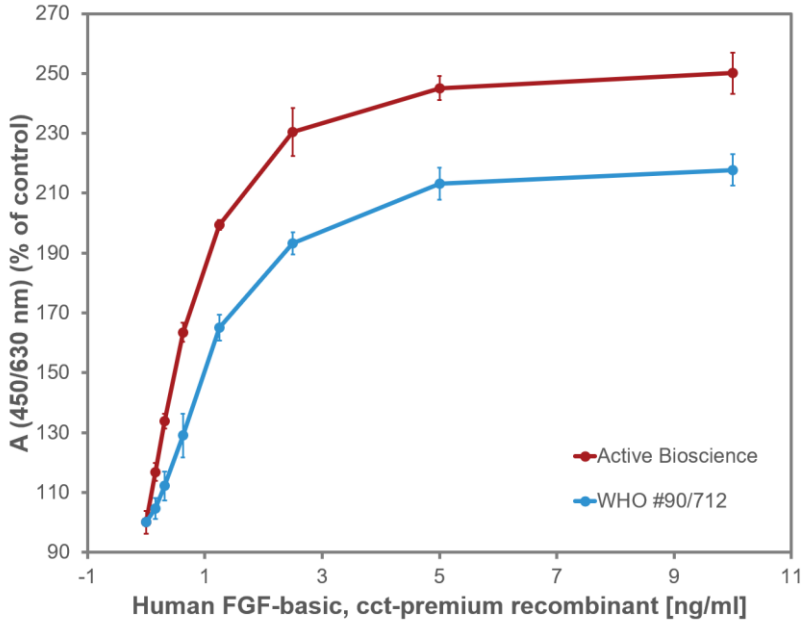

***Fig. 2**: FGF-basic, cct-premium induced proliferation of primary human umbilical vein endothelial cells (HUVEC). The cells were stimulated using recombinant human FGF-2 and the WHO standard 90/712. Values are the means (±SD) of triplicate determinations and expressed as percentage of control.*

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

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