Human FGF-basic, FGF-2

Human Fibroblast Growth Factor-basic, recombinant

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

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
50 µg	1369.950.050		
200 µg	1369.950.200		
250 µg	1369.950.250		
500 µg	1369.950.500		
1 mg	1369.950.199		

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** ≥ 5.0 x 10^5 units/mg
- **Source** *E. Coli*
- **Purity** ≥ 98 % (SDS-PAGE, silver stained)
- **Endotoxin level** < 0.1 ng per µg of human FGF-2
- **Stabilizer** None
- **Buffer** PBS*
- **Physical state** Sterile filtered, lyophilized

Biological Activity

The ED_{50} of ≤ 2 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 ≥ 5.0 x 10^5 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. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (0.1% BSA or HSA) and store in working aliquots at -20°C to -80°C for up to 12 months.

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

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

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