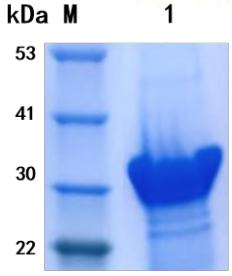
Human Fibroblast Growth Factor 2 (FGF2) Protein, Recombinant

I. For sale

Product name	Catalog #	Size
Human Fibroblast Growth Factor 2 (FGF2) Protein, Recombinant	P01F0002	10ug
		50ug
		100ug
		1mg

II. Product Description

Other Names	BFGF; FGFB; FGF-2; HBGF-2
Protein & NCBI Number	D9ZGF5, NM_001361665.2
Host	E.coli
Express Region	1-155aa
Protein Length	Total length of the protein（including Tag）
Protein Sequence	MAAGSITTLPALPEDGGSGAFPPGHFKDPKRLYCKNGGFFLRIH PDGRVDGVREKSDPHIKLQLQAEERGVVSIKGVCANRYLAMKEDGRLLASKCVTDECF FFERLESNNYNTYRSRKYTSWYVALKRTGQYKLGSKTGPGQKAILFLPMSAKS
Molecular Weight	about 17.3kDa
Fusion Tag	6×His-SUMO (N-terminus)
Purity	≥95% SDS-PAGE
Physical Property	liquid or lyophilized powder
Reconstitution	Storage solution: We recommend using PBS or a suitable solvent according to the experimental requirements to prepare 1mg/mL storage solution, aliquot and store at -20 °C. Working solution: According to the experimental requirement, dilute Storage solution. The working solution can be stored at 4°C for 2-3 weeks after dilution.
Storage & Stability	The shelf life of liquid form is 6 months stored at -20 °C /-80 °C. The shelf life of lyophilized form is 12 months stored at -20 °C /-80 °C.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products
Figure. SDS-PAGE	 Bis-Tris (MOPS) SDS-PAGE

III. **Storage and Transportation**

Product is stable for up to twelve months from date of receipt under sterile conditions at -20℃ to -80℃. For optimal storage the lyophilized powder and protein stock solution should be aliquoted, and avoid freeze-thaw cycles.

IV. **Background**

FGF-2, also known as basic fibroblast growth factor (bFGF), is an important member of fibroblast growth factor (FGF) family. FGF-2 is a cationic polypeptide with a molecular weight of 16 ~ 18000 and an isoelectric point of 9.6. FGF2 can be produced by vascular endothelial cells, retinal pigment epithelial cells, photoreceptor cells, m ü ller cells and astrocytes. It widely exists in a variety of tissues in vivo and mainly plays a role through autocrine and paracrine. The signal pathway induced by FGF2 is necessary for normal cell growth and differentiation. It exists in almost all cells. FGF2 binds to FGFR, which makes the receptor dimerize and tyrosine kinase is activated, triggering a series of intracellular phosphorylation cascade reactions to regulate cell growth Differentiation and apoptosis. Under normal conditions, FGF-2 binds to heparin and does not produce biological effects. However, in some pathological cases, the integrity of cells is destroyed, which can release the stored form of FGF-2, promote angiogenesis and participate in the process of tissue repair. FGF-2 and FGFR are almost distributed in various tissues of the whole body. FGF-2 is the strongest known cytokine. It plays an important role in promoting angiogenesis, wound healing, tissue injury repair, neuroprotection, embryonic development and tumor formation. FGF-2 has two main functions, inducing endothelial cell germination and proliferation and increasing vascular permeability. In addition, studies have shown that FGF2 is also closely related to depression.

V. **References**

1. Germán Andrés et al. A pro‐inflammatory signature mediates FGF2‐induced angiogenesis. Journal of Cellular and Molecular Medicine, 2009, 13(8b) : 2083-2108.
2. Barrientos S,Brem H,Stojadinovic O et al. Clinical application of growth factors and cytokines in wound healing. Wound Repair and Regeneration, 2014, 22(5) : 569-578.
3. Murakami Shinya. [Periodontal regeneration by FGF2]. Clinical calcium, 2007, 17(2):249-55.