

FGF-2 Protein, Human, Recombinant

General Information

Synonyms:	fibroblast growth factor 2 (basic); FGF-2; FGFB; HBGF-2; BFGF
Protein Construction:	A DNA sequence encoding the mature form of human bFGF (NP_001997.5) (Pro143-Ser288) was expressed with an additional Met at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P09038-4
Molecular Weight:	16.5 kDa (predicted)

QC Testing

Biological Activity:	1. iPSC-derived human vascular organoids (Day 7) were cultured with FGF2, VEGFA, EGF. Red arrows represent vascular organoids. Image taken at 10x magnification. (Routinely tested) 2. Measured in a cell proliferation assay using Balb/c 3T3 mouse embryonic fibroblasts. The ED50 for this effect is typically 0.01-0.1 ng/mL.
Purity:	≥ 95 % as determined by SDS-PAGE
Endotoxin:	< 10 EU/mg of the protein.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
Reconstituted with sterile deionized water to 0.15 mg/mL.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Basic fibroblast growth factor (bFGF), also known as FGF2, is a member of the fibroblast growth factor (FGF) family. It is a highly specific chemotactic and mitogenic factor for many cell types, appears to be involved in remodeling damaged tissue, such as ulcer healing, vascular repair, traumatic brain injury (TBI). bFGF is a critical

component of human embryonic stem cell culture medium. In addition, bFGF protein is a heparin-binding cationic protein involved in a variety of pathological conditions including angiogenesis and solid tumour growth. Thus, bFGF is regarded as a target for cancers chemopreventive and therapeutic strategies. bFGF/FGF2 Protein & Antibody Products

Reference

- Takayama S, et al. (2001) Periodontal regeneration by FGF-2 (bFGF) in primate models. *J Dent Res.* 80(12): 2075-9.
- Niu YJ, et al. (2004) Therapeutic effect of bFGF on retina ischemia-reperfusion injury. *Chin Med J (Engl).* 117(2): 252-7.
- Zhang Y, et al. (2004) Expression of aFGF, bFGF, and FGFR1 in ovarian epithelial neoplasm. *Chin Med J (Engl).* 117(4): 601-3.

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