

Recombinant Human Fibroblast Growth Factor 2 (Basic) (a. a. 155)

Human, Antigen (FGF2)

Cat. No: DAG302

Lot.No: (See product label)

PRODUCT INFORMATION

Product Overview: Recombinant Human FGF2 (FGF-2) is a single, non-glycosylated, polypeptide chain containing 155 amino acids and having a molecular weight of 17,353 Da, was expressed in *E. coli*. The sequence of the first five N-terminal amino acids was determined to be Ala-Glu-Gly-Glu-Ile.

Antigen Description: Basic fibroblast growth factor, also known as bFGF, FGF2 or FGF- β , is a member of the fibroblast growth factor family. bFGF is a critical component of human embryonic stem cell culture medium; the growth factor is necessary for the cells to remain in an undifferentiated state, although the mechanisms by which it does this are poorly defined. It has been demonstrated to induce gremlin expression which in turn is known to inhibit the induction of differentiation by bone morphogenetic proteins. It is necessary in mouse-feeder cell dependent culture systems, as well as in feeder and serum-free culture systems

Form: Purified, Lyophilized. Reconstitute using sterile deionized water to a concentration $\geq 100\mu\text{g/ml}$. Further dilutions can be made in other aqueous buffers.

Source: *E. coli*

Purification: >96% pure (RP-HPLC and SDS-PAGE). Purified by chromatographic techniques Product is sterile filtered.

Inactivation: Not applicable

Applications: The ED50 as determined by the dose-dependent proliferation of BAF3 cells expressing FGF receptors (measured by ^3H -thymidine uptake) is $<0.5\text{ng/ml}$, corresponding to a specific activity of 2×10^6 Units/mg. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.

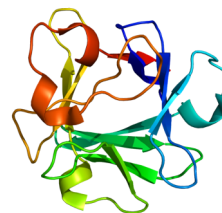
PACKAGING

Concentration: 1mg/ml (OD280nm, $E^{0.1\%} = 0.8511$) (prior to lyophilization)

Buffer: Lyophilized from PBS, pH 7.4

Preservative: None

Storage: The lyophilized product, though stable for 3 weeks at room temperature, is best stored at -20°C . After reconstitution, short term (up to 1 week) store at $2-8^\circ\text{C}$. Long term, add 0.1% HSA or BSA, aliquot and store at -20°C . Avoid multiple freeze/thaw cycles.



PDB rendering based on 1bas.

GENE INFORMATION

Gene Name: [FGF2 fibroblast growth factor 2 \(basic\) \[Homo sapiens\]](#)

Official Symbol: FGF2

Synonyms: FGF2; fibroblast growth factor 2 (basic); BFGF; FGFB; HBGF-2; heparin-binding growth factor 2; prostatropin; OTTHUMP00000037513; basic fibroblast growth factor bFGF; bFGF; Fibroblast Growth Factor-basic; FGF-basic; Basic fibroblast growth factor; FGF- β ; FGF 2; FGF B; FGF2 basic; HBGF 2; HBGF2; HBGH 2; HBGH2; Heparin binding growth factor 2 precursor; Prostatropin

GeneID: [2247](#)

mRNA Refseq: [NM_002006](#)

Protein Refseq: [NP_001997](#)

MIM: [134920](#)

UniProt ID: P09038

Chromosome Location: 4q26

Pathway: Angiopoietin receptor Tie2-mediated signaling; Downstream signaling of activated FGFR; Endochondral Ossification; FGFR ligand binding and activation; FGFR2 ligand binding and activation

Function: chemoattractant activity; cytokine activity; fibroblast growth factor binding; fibroblast growth factor receptor binding; growth factor activity; heparin binding; ligand-dependent nuclear receptor transcription coactivator activity; protein binding; protein tyrosine kinase activity; voltage-gated calcium channel activity

REFERENCES

1. He W et al. Blockade of Wnt/ β -catenin signaling by paricalcitol ameliorates proteinuria and kidney injury. *J Am Soc Nephrol* 22:90-103 (2011). WB; Mouse.
2. Hsu MY et al. Aggressive melanoma cells escape from BMP7-mediated autocrine growth inhibition through coordinated Noggin upregulation. *Lab Invest* 88:842-55 (2008). PubMed: 18560367