

Recombinant Human FGF1 protein

Cat. No. FGF1-09H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human FGF1 protein (2-155 a.a.) was expressed in Escherichia coli.

Species Human

Source E.coli

ProteinLength 154

Description

Human aFGF, encoded by the FGF1 gene, is a member of the fibroblast growth factor (FGF) family. Fibroblast growth factor was found in pituitary extracts in 1973 and then tested in a bioassay that caused fibroblasts to proliferate. After further fractionating the extract using acidic and basic pH, two different forms have isolated that named "acidic fibroblast growth factor" (FGF-1) and "basic fibroblast growth factor" (FGF-2). Human aFGF shares 54 % amino acid sequence identity with bFGF. In mammalian FGF receptor family has 4 members, FGFR1, FGFR2, FGFR3, and FGFR4, and 1, 2, 3 have 2 sub-types "b", "c". aFGF can bind and activate all 7 different FGFRs. Affinity between aFGF and its receptors can be increased by heparin or heparan sulfate proteoglycan. aFGF plays an important role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. aFGF are also involved in a variety of biological processes, including embryonic development , morphogenesis, tissue repair, tumor growth and invasion.

Form

Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4, with 2 mM EDTA, 0.5 mM DTT, 5 % Trehalose.

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Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using murine balb/c 3T3 cells is less than 0.5 ng/ml, corresponding to a specific activity of $> 2.0 \times 10^6$ IU/mg in the presence of 10 μ g/ml of heparin.
Molecular Mass	Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 154 amino acids.
AA Sequence	AEGEITTF TALTEKFNLP PGNYKKPKLLYCSNGGHFLRILPDGTV DGRDRSDQHIQL QLSAESVGEVYIKSTETGQYLAMDTDGLLYGSQTPNEECLFLERLEENHYNTYISKK HAEKNWVGLKKN GSCRGP RTHYGQKAILFLPLPVSSD
Endotoxin	Less than 0.1 EU/g of rHuaFGF, 2-155a.a. as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name FGF1

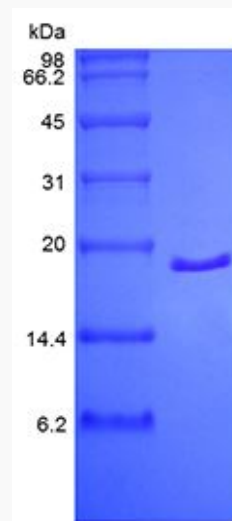
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Official Symbol	FGF1
Synonyms	FGF1; fibroblast growth factor 1 (acidic); FGFA; fibroblast growth factor 1; AFGF; ECGF; ECGF beta; ECGFA; ECGFB; endothelial cell growth factor; alpha; beta; FGF alpha; GLIO703; HBGF1; heparin binding growth factor 1; heparin-binding growth factor 1; beta-endothelial cell growth factor; endothelial cell growth factor, beta; endothelial cell growth factor, alpha; FGF-1; HBGF-1; ECGF-beta; FGF-alpha;
Gene ID	2246
mRNA Refseq	NM_000800
Protein Refseq	NP_000791
MIM	131220
UniProt ID	P05230

SDS-PAGE of FGF1-09H



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