

Recombinant Human FGF2 protein

Cat. No. FGF2-590H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human FGF2 protein (Pro143-Ser288) carries no tag and was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	146
Description	FGF basic is a member of the FGF family of at least 23 related mitogenic proteins which show 35-60% amino acid conservation. FGF acidic and basic, unlike the other members of the family, lack signal peptides and are apparently secreted by mechanisms other than the classical protein secretion pathway. FGF basic has been isolated from a number of sources, including neural tissue, pituitary, adrenal cortex, corpus luteum, and placenta. This factor contains four cysteine residues, but reduced FGF basic retains full biological activity, indicating that disulfide bonds are not required for this activity. 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.

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Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 16.5 kDa. The protein migrates as 17 kDa under reducing (R) condition (SDS-PAGE).
Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>98% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	FGF2
Official Symbol	FGF2
Synonyms	FGF2; fibroblast growth factor 2 (basic); FGFB; fibroblast growth factor 2; prostatropin; heparin-binding growth factor 2; basic fibroblast growth factor bFGF; BFGF; FGF-2; HBGF-2
Gene ID	2247

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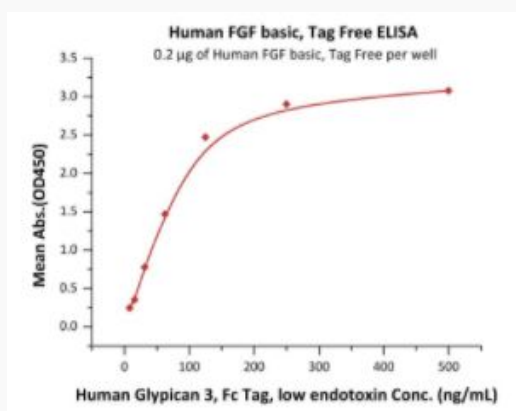
mRNA Refseq [NM_002006](#)

Protein Refseq [NP_001997](#)

MIM [134920](#)

UniProt ID [P09038](#)

Bioactivity-ELISA of FGF2-590H



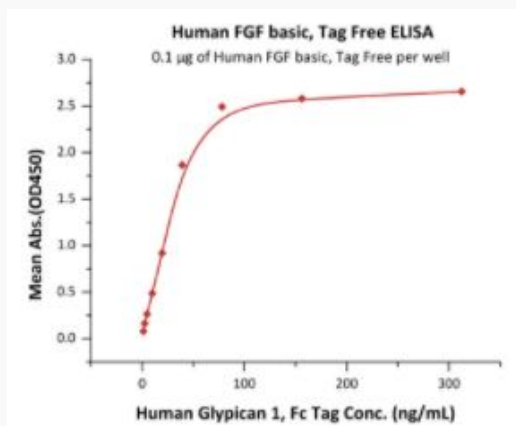
Immobilized Human FGF basic, Tag Free at 2 µg/mL (100 µL/well) can bind Human Glypican 3, Fc Tag, low endotoxin with a linear range of 4-125 ng/mL (QC tested).

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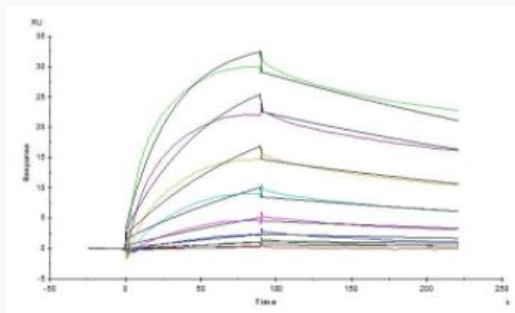
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Bioactivity-ELISA of FGF2-590H



Immobilized Human FGF basic, Tag Free at 1 µg/mL (100 µL/well) can bind Human Glypican 1, Fc Tag with a linear range of 1-39 ng/mL (Routinely tested).

Bioactivity-SPR of FGF2-590H



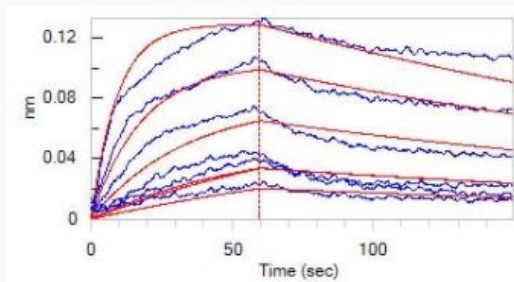
Immobilized Human FGF basic, Tag Free on CM5 Chip can bind Heparin with an affinity constant of 8.37 nM as determined in a SPR assay (Routinely tested).

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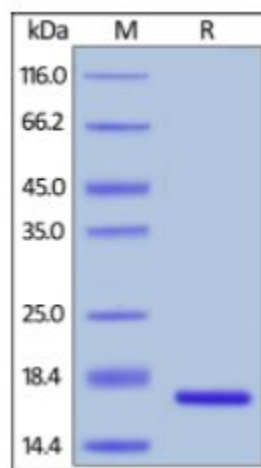
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Bioactivity-BLI of FGF2-590H



Loaded Biotinylated Heparin on SA Biosensor, can bind Human FGF basic, Tag Free with an affinity constant of 1.88 nM as determined in BLI assay (Routinely tested).

SDS-PAGE of FGF2- 590H



Human FGF basic, Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 98%.