Store at -20°C

Human FGF-basic/FGF2 (147 aa) Recombinant Protein

#42430

10 µg

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Entrez-Gene ID #2247
UniProt ID #P09038

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Background: FGF-basic (FGF2) is produced by epithelial, tumor, and other cell types (1). FGF-basic is involved in developmental processes and regulates differentiation, proliferation, and migration (1-6). FGF-basic is a critical factor for growing embryonic stem cells in culture without inducing differentiation. FGF-basic has a high affinity for heparan sulfate (1,2) and FGF-heparan sulfate binding is a step in the activation of FGFR tyrosine kinase. There are four distinct FGF receptors and each has multiple splice variants. FGF-basic binds with high affinity to many, but not all, FGFRs. Signaling cascades activated through FGF-basic binding to FGFR include the ras-raf-MAPK, PLCγ/PKC, and PI3K/Akt pathways (1).

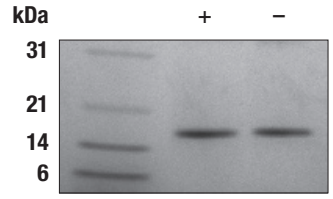
Molecular Weight: 16.5 kDa

Endotoxin: Endotoxin levels are ≤ 1 EU / 1 µg hFGF-basic.

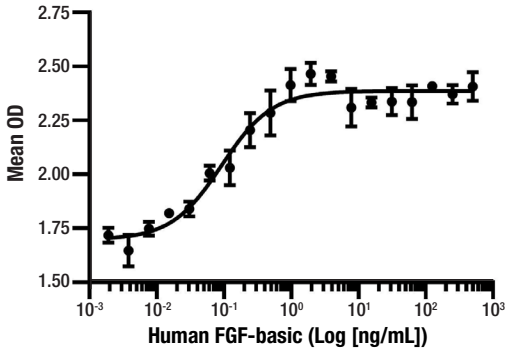
Purity: ≥ 95% purity was determined by SDS-PAGE.

Source/Purification: Recombinant human FGF-basic was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant human FGF-basic was determined in an NR6R-3T3 cell proliferation assay. The ED_{50} of each lot is ≤ 5 ng/mL.



The purity of Human FGF-basic/FGF2 (147 aa) Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant hFGF-basic and staining with Coomassie Blue.



Serial dilutions of Human FGF-basic/FGF2 (147 aa) Recombinant Protein were added to NR6R-3T3 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED_{50}.

Storage: Human FGF-basic/FGF2 (147 aa) Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/mL which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

(1) Dvorak, P. and Hampl, A. (2005) *Folia Histochem Cytobiol* 43, 203-8.

(2) Ornitz, D.M. and Itoh, N. (2001) *Genome Biol* 2, REVIEWS3005.

(3) Shi, Y. et al. (2008) *Crit Rev Oncol Hematol* 65, 43-53.

(4) Fontijn, D. et al. (2006) *Br J Cancer* 94, 1627-36.

(5) Marek, L. et al. (2009) *Mol Pharmacol* 75, 196-207.

(6) Acevedo, V.D. et al. (2009) *Cell Cycle* 8, 580-8.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.