

## Active Recombinant Human FGF2 Protein (Formulation I- Animal Free-Lyophilized, 134-288, 154 amino acid)

Cat. No. FGF2-20H    Lot. No. (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Product Overview</b> | Recombinant Human FGF2 Protein (Formulation I- Animal Free-Lyophilized, 134-288, 154 amino acid) without tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ProteinLength</b>    | 134-288, 154 amino acid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | <p>The protein encoded by this gene is a member of the fibroblast growth factor (FGF) family. FGF family members bind heparin and possess broad mitogenic and angiogenic activities. This protein has been implicated in diverse biological processes, such as limb and nervous system development, wound healing, and tumor growth. The mRNA for this gene contains multiple polyadenylation sites, and is alternatively translated from non-AUG (CUG) and AUG initiation codons, resulting in five different isoforms with distinct properties. The CUG-initiated isoforms are localized in the nucleus and are responsible for the intracrine effect, whereas, the AUG-initiated form is mostly cytosolic and is responsible for the paracrine and autocrine effects of this FGF.</p> |
| <b>Form</b>             | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Bio-activity</b>     | ED50= 0.1-1.0 ng/mL as determined by the dose dependent proliferation of NIH 3T3 cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 17.3 kDa                                                                                                                                                                                                                                                                                                                                           |
| <b>AA Sequence</b>    | AAGSITTLPALPEDGGSGAFPPGHFKDPKRLYCKNGGFFLRIHPDGRVDGVREKSD<br>PHIKLQLQAEERGVSIGKVCANRYLAMKEDGRLLASKCVTDECFFFERLESNNYNT<br>YRSRKYTSWYVALKRTGQYKLGSKTGPGQKAILFLPMSAKS                                                                                                                                                                                  |
| <b>Endotoxin</b>      | < 0.01 ng/μg cytokine as determined by the LAL assay                                                                                                                                                                                                                                                                                               |
| <b>Purity</b>         | > 98% by SDS-PAGE                                                                                                                                                                                                                                                                                                                                  |
| <b>Usage</b>          | Useful for cell culture and for the study of signaling pathways.                                                                                                                                                                                                                                                                                   |
| <b>Storage</b>        | Upon receipt, it should be stored immediately at -20 to -80 centigrade. Lyophilized bFGF is stable at -20 to -80 centigrade for up to 16 months.                                                                                                                                                                                                   |
| <b>Storage Buffer</b> | Sterile filtered through a 0.22 micron filter and lyophilized from Tris buffer (10 mM Tris pH7.5, 150 mM NaCl).                                                                                                                                                                                                                                    |
| <b>Reconstitution</b> | Centrifuge vial before opening. It is recommended to reconstitute bFGF in sterile 10 mM Tris-HCl, pH 7.5 to yield a stock solution of 0.1 mg/mL of bFGF. It is stable for up to 6 months when stored at -20 centigrade and up to 12 months when stored at -80 centigrade. Multiple freeze/thaw cycles will result in significant loss of activity. |
| <b>Shipping</b>       | The product is shipped at ambient temperature with ice bags.                                                                                                                                                                                                                                                                                       |

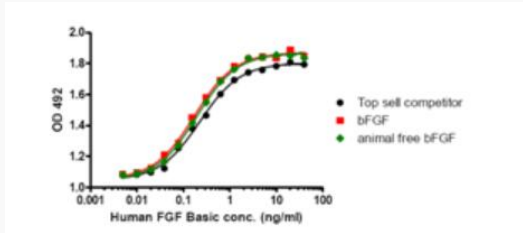
## GENE INFORMATION

|                        |                                                          |
|------------------------|----------------------------------------------------------|
| <b>Gene Name</b>       | FGF2 fibroblast growth factor 2 [ Homo sapiens (human) ] |
| <b>Official Symbol</b> | FGF2                                                     |

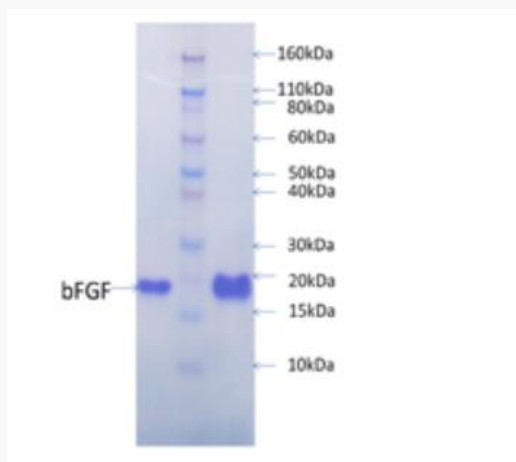
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| <b>Synonyms</b>       | FGF2; fibroblast growth factor 2; bFGF; FGFB; FGF-2; HBGF-2; fibroblast growth factor 2; basic fibroblast growth factor bFGF; fibroblast growth factor 2 (basic); heparin-binding growth factor 2; prostatropin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Gene ID</b>        | 2247                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>mRNA Refseq</b>    | NM_002006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Protein Refseq</b> | NP_001997                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>MIM</b>            | 134920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>UniProt ID</b>     | P09038                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Activity</b>       |  <p>The graph displays the activity of three different FGF preparations. The x-axis represents the concentration of Human FGF Basic in ng/ml on a logarithmic scale from 0.001 to 100. The y-axis represents the optical density at 492 nm (OD 492) on a linear scale from 1.0 to 2.0. All three curves show a sigmoidal increase in activity with increasing concentration, reaching a plateau around 1.8-1.9 OD 492 units. The 'animal free bFGF' (green circles) and 'bFGF' (red squares) show slightly higher activity at higher concentrations compared to the 'Top sell competitor' (black circles).</p> |

## SDS-PAGE



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