

Datasheet for ABIN1589659 FGF2 Protein



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Overview

Quantity:	10 µg
Target:	FGF2
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Purpose:	FGF-2 (basic)
Sequence:	ALPEDGGAAP PPGHFKDPKR LYCKNGGFFL RIHPDGRVDG VREKSDPHVK LQLQAEERGV VSIKGVCANR YLAMKEDGRL LASKCVTEEC FFFERLESNN YNTYRSRKYS SWYVALKRTG QYKLGSKTGP GQKAILFLPM SAKS
Specificity:	Chromosomal location:3 A2-B, 3 19.3 cM
Characteristics:	Length (aa):144
Purity:	> 98 % by SDS-PAGE
Endotoxin Level:	< 0.1 ng per µg of mouse FGF-2

Target Details

Target:	FGF2
Alternative Name:	FGF-2 (FGF2 Products)

Target Details

Background: The FGF family is composed of at least 23 polypeptides that show a variety of biological activities towards cells of mesenchymal, neuronal and epithelial origin. All members are heparin-binding growth factors (HB-GF). Until the structure of basic fibroblast growth factor (bFGF/FGF-2) was determined, a number of synonyms was used to describe this growth factor. As is often the case, the nomenclature reflected the observed activities reported by individual groups. Basic FGF has been reported as leukemia growth factor, macrophage growth factor, endothelial growth factor and tumor angiogenesis factor. The eventual isolation and characterization of bFGF was done from soluble brain extracts. bFGF was found to have a molecular mass of 16.5 kDa and to be 154 amino acids in length. Interestingly, bFGF contains no hydrophobic leader sequence previously thought to be required for cell secretion. Basic FGF bears 55 % homology to acidic FGF and also seems to exist in three forms: the 154 amino-acid form and two other truncated versions of 146 and 131 amino acids lacking the N-terminal 9 and 24 residues. Acidic and basic FGF compete for the binding to 125 kDa and 145 kDa receptor species. However, acidic FGF has a higher affinity for the 125 kDa species, while basic FGF has a higher affinity for the 145 kDa species. FGF receptor activation leads to the activation of MAP kinase and protein kinase C. FGF's induce the proliferative response in cells derived from mesoderm and neuroectoderm. It seems that basic FGF reduces the average doubling time by shortening the G1 phase of the cell cycle. Furthermore, it has been reported to induce the release of plasminogen activator by endothelial cells. Perhaps one of the most potentially significant applications of bFGF is related to its reported ability to induce angiogenesis.

Synonyms: Fgf2, Fgfb, bFGF, Fgf-2

Molecular Weight: 16.35 kDa

Gene ID: 14173

NCBI Accession: [NM_008006](#), [NP_032032](#)

UniProt: [P15655](#)

Pathways: [RTK Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [C21-Steroid Hormone Metabolic Process](#), [Inositol Metabolic Process](#), [Glycosaminoglycan Metabolic Process](#), [Protein targeting to Nucleus](#), [S100 Proteins](#)

Application Details

Application Notes: The ED50 for stimulation of cell proliferation by human umbilical vein endothelial cells for mouse FGF-2 has been determined to be in the range of 0.1-2 ng/mL.

Application Details

Comment: Cytokines & Growth Factors

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: The lyophilized basic FGF should be reconstituted in water containing at least 0.1 % human or bovine serum albumin to a concentration not lower than 10 µg/mL.

Buffer: PBS

Storage: 4 °C,-20 °C,-80 °C

Storage Comment: Lyophilized samples are stable for greater than six months at -20°C to -70°C. Basic FGF can be stored in high-salt buffer (PBS, 1M NaCl) at 4°C for 2-4 weeks.

Expiry Date: 6 months
