

Datasheet for ABIN1589670 FGF2 Protein



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Overview

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

Product Details

Purpose:	FGF-2 (basic)
Sequence:	ALPEDGGGAF PPGHFKDPKR LYCKNGGFFL RIHPDGRVDG VREKSDPHVK LQLQAEERGV VSIKGVCANR YLAMKEDGRL LASKCVTEEC FFFERLESNN YNTYRSRKYS SWYVALKRTG QYKLGSKTGP GQKAILFLPM SAKS
Specificity:	Chromosomal location:2q25
Characteristics:	Length (aa):145
Purity:	> 98 % by SDS-PAGE
Endotoxin Level:	< 0.1 ng per µg of rat 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 were 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. Perhaps one of the most potentially significant applications of bFGF is related to its reported ability to induce angiogenesis. The cDNA of native rat FGF-2 (Ala11-Ser154) was cloned from total RNA derived from a rat embryo using standard protocols. Bitte hier Text zur Produktinformation eingeben. Hinweis: Bei copy/paste Prozessen auf Vollständigkeit überprüfen.

Synonyms: Fgf2, bFGF, Fgf-2

Molecular Weight: 16.34 kDa

Gene ID: 54250

NCBI Accession: [NM_019305](#), [NP_062178](#)

UniProt: [P13109](#)

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 in human umbilical vein endothelial cells (HUVEC) by rat 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 rat FGF-2 is supplied in lyophilized form and can be reconstituted with ddH₂O at 50 µg/mL. This solution can be diluted into other buffered solutions or stored frozen for future use. For long term storage we would recommend to add at least 0.1 % human or bovine serum albumin.

Buffer: 0.5X PBS

Storage: RT, -20 °C, -80 °C

Storage Comment: The lyophilized rat FGF-2, though stable at room temperature, is best stored in working aliquots at -20°C to -70°C