Datasheet for ABIN2666810

FGF4 Protein (AA 54-206)

Go to Product page

Overview

Quantity:	25 µg
Target:	FGF4
Protein Characteristics:	AA 54-206
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS), Immunohistochemistry (IHC)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	FGF4
Alternative Name:	FGF-4 (FGF4 Products)
Background:	FGF-4 was first identified as HST-1 gene by a NIH3T3 transforming assay. It belongs to the FGF family that includes 22 members FGF1-FGF23. FGF15 has not been identified in humans. FGF-4 exhibits strong effects on many different cell types and tissues, and plays important roles in both embryogenesis and adult tissue stem cell development in a variety of organisms. FGF-4

Target Details

	can stimulate limb mesenchyme proliferation and can provide all the signals required for normal outgrowth and patterning of the limb. FGF-4 mRNA has been detected in the apical ectodermal ridge of the limb bud in Days 11 and 12 embryos. FGF-4 is also involved in early heart development by supporting the proliferation and differentiation of precardiac myoblasts. In adults, FGF-4 is expressed in the testis and its overexpression results in enhanced spermatogenesis. FGF-4 is also a potent inducer of platelet production from megakaryocytes. FGF-4 expression has been detected in the brain at both neonatal and adult stages. FGF-4 can induce neural stem cell proliferation and neuronal differentiation. The diverse functions of FGF-4 are mediated by FGF receptors (FGFR) that contain an extracellular ligand-binding domain with three immunoglobulin-like domains. Like other FGFs, FGF-4 also binds to anionic glycosaminoglycans heparin and heparin sulfate with high affinity. Heparin sulfate availability has been shown to regulate the binding between FGF-4 and its receptors. The role of FGF-4 in cancer has also been extensively investigated. FGF-4 is an angiogenic protein, and amplification of FGF-4 gene has been found in many human tumors. It has been shown that FGF-4 is a potential target for the treatment of human testicular tumors.
Molecular Weight:	The 153 amino acid recombinant protein has a predicted molecular mass of approximately 19.7 kDa. The non-reduced and DTT-reduced protein migrates at approximately 19.7 kDa by SDS-PAGE. The predicted N-terminal amino acid is Serine.
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Stem Cell Maintenance

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: The ED50 is 0.2-1 ng/ml, corresponding to a specific activity 1-5 x 106 units/mg, as determined by a dose-dependent stimulation of NIH3T3 cell proliferation.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1 % BSA or HSA. After dilution, the cytokine can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.

Handling

Buffer:	0.22 µm filtered protein solution is in PBS.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.