FGFR-4 Protein, Rat (HEK293, Fc, Solution)

Cat. No.:	HY-P73061
Synonyms:	Fibroblast growth factor receptor 4; FGFR-4; CD334; JTK2; TKF
Species:	Rat
Source:	HEK293
Accession:	Q498D6 (F17-D367)
Gene ID:	25114
Molecular Weight:	Approximately 110 kDa

PROPERTIES

AA Sequence	MWLLLALLSI FQETPAFSLE ASEEMEQEPC PAPISEQQEQ VLTVALGQPV RLCCGRTERG RHWYKEGSRL ASAGRVRGWR GRLEIASFLP EDAGRYLCLA RGSMTVVHNL TLIMDDSLPS INNEDPKTLS SSSSGHSYLQ QAPYWTHPQR MEKKLHAVPA GNTVKFRCPA AGNPMPTIHW LKNGQAFHGE NRIGGIRLRH QHWSLVMESV VPSDRGTYTC LVENSLGSIR YSYLLDVLER SPHRPILQAG LPANTTAVVG SNVELLCKVY SDAQPHIQWL KHIVINGSSF GADGFPYVQV LKTTDINSSE VEVLYLRNVS AEDAGEYTCL AGNSIGLSYQ SAWLTVLPAE EEDLAWTTAT SEARYTD
Biological Activity	1. Measured by its binding ability in a functional ELISA. 2. Immobilized human FGF18 at 10 μg/mL (100 μl/well) can bind Rat FGFR4 , The EC_{50} of Rat FGFR4 is 1.17 μg/mL. 3. Immobilized mouse FGF18 at 10 μg/mL (100 μl/well) can bind Rat FGFR4 , The EC_{50} of Rat FGFR4 is 0.44 μg/mL. 4. Immobilized human bFGF at 10 μg/mL (100 μl/well) can bind Rat FGFR4 , The EC_{50} of Rat FGFR4 is 0.163 μg/mL.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	FGFR-4 protein, a tyrosine-protein kinase, functions as a cell-surface receptor for fibroblast growth factors, playing a crucial role in the regulation of cell proliferation, differentiation, and migration. Additionally, it contributes to the control of lipid metabolism, bile acid biosynthesis, glucose uptake, vitamin D metabolism, and phosphate homeostasis. Its significance is highlighted in the normal down-regulation of CYP7A1, the rate-limiting enzyme in bile acid synthesis, in response to FGF19. Upon ligand binding, FGFR-4 activates various signaling cascades, including the phosphorylation of PLCG1 and FRS2. This activation leads to the production of cellular signaling molecules like diacylglycerol and inositol 1,4,5-trisphosphate. Furthermore, FRS2 phosphorylation triggers the recruitment of GRB2, GAB1, PIK3R1, and SOS1, activating RAS, MAPK1/ERK2, MAPK3/ERK1, the MAP kinase signaling pathway, and the AKT1 signaling pathway. Notably, FGFR-4 promotes SRC-dependent phosphorylation of the matrix protease MMP14, facilitating its lysosomal degradation. To regulate FGFR-4 signaling, the receptor undergoes internalization and degradation, a process facilitated by MMP14.

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