FGFR-4 Protein, Rat (HEK293, C-hFc)

Cat. No.:	HY-P73061A
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	F S L E A S E E M E Q E P C P A P I S E Q Q E Q V L T V A L G Q P V R L C C G R T E R G R H W Y K E G S R L A S A G R V R G W R G R L E I A S F L P E D A G R Y L C L A R G S M T V V H N L T L I M D D S L P S I N N E D P K T L S S S S S S G H S Y L Q Q A P Y W T H P Q R M E K K L H A V P A G N T V K F R C P A A G N P M P T I H W L K N G Q A F H G E N R I G G I R L R H Q H W S L V M E S V V P S D R G T Y T C L V E N S L G S I R Y S Y L L D V L E R S P H R P I L Q A G L P A N T T A V V G S N V E L L C K V Y S D A Q P H I Q W L K H I V I N G S S F G A D G F P Y V Q V L K T T D I N S S E V E V L Y L R N V S A E D A G E Y T C L A G N S I G L S Y Q S A W L T V L P A E E E D L A W T T A T S E A R Y T D
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.Measured by its ability to inhibit FGF acidic-dependent proliferation of NIH-3T3 mouse fibroblast cells. The ED_{50} for this effect is 1.025 ng/mL, corresponding to a specific activity is 9.76×10^5 units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA