

FGFR-4 Protein, Rat (HEK293, His)

Cat. No.:	HY-P75190
Synonyms:	Fibroblast growth factor receptor 4; FGFR-4; CD334; JTK2; TKF
Species:	Rat
Source:	HEK293
Accession:	Q498D6 (M1-D367)
Gene ID:	25114
Molecular Weight:	64-68 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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.

Caution: Product has not been fully validated for medical applications. For research use only.

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