

## FGFR-1 Protein, Mouse (HEK293, Fc)

Cat. No.:	HY-P75767
Synonyms:	Fibroblast growth factor receptor 1; FGFR-1; BFGFR; FLT-2; CD331; HBGFR
Species:	Mouse
Source:	HEK293
Accession:	P16092 (M1-E376)
Gene ID:	14182
Molecular Weight:	100-110 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 <sub>2</sub> 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-1 protein, a tyrosine-protein kinase, serves as a cell-surface receptor for fibroblast growth factors and plays a crucial role in the intricate regulation of embryonic development, cell proliferation, differentiation, and migration. It is indispensable for normal mesoderm patterning, correct axial organization during embryonic development, skeletogenesis, and the development of the gonadotropin-releasing hormone (GnRH) neuronal system. Upon ligand binding, FGFR-1 activates multiple signaling cascades, phosphorylating key proteins such as PLCG1, FRS2, GAB1, and SHB. This activation leads to the production of signaling molecules like diacylglycerol and inositol 1,4,5-trisphosphate through PLCG1. Moreover, phosphorylation of FRS2 triggers the recruitment of GRB2, GAB1, PIK3R1, and SOS1, mediating the activation of RAS, MAPK1/ERK2, MAPK3/ERK1, the MAP kinase signaling pathway, and the AKT1 signaling pathway. FGFR1 also promotes the phosphorylation of SHC1, STAT1, and PTPN11/SHP2. Within the nucleus, it enhances the activity of RPS6KA1 and CREB1, contributing to the regulation of transcription. The down-regulation of FGFR1 signaling occurs through IL17RD/SEF and FGFR1 ubiquitination, internalization, and degradation.

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**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](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA