

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

<b>Cat. No.:</b>	HY-P75768
<b>Synonyms:</b>	Fibroblast growth factor receptor 1; FGFR-1; BFGFR; FLT-2; CD331; HBGFR
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	P16092 (R22-E376)
<b>Gene ID:</b>	14182
<b>Molecular Weight:</b>	Approximately 60-80 kDa due to the glycosylation.

### PROPERTIES

<b>AA Sequence</b>	<p>           R P A P T L P E Q A    Q P W G V P V E V E    S L L V H P G D L L    Q L R C R L R D D V            Q S I N W L R D G V    Q L V E S N R T R I    T G E E V E V R D S    I P A D S G L Y A C            V T S S P S G S D T    T Y F S V N V S D A    L P S S E D D D D D    D D S S S E E K E T            D N T K P N R R P V    A P Y W T S P E K M    E K K L H A V P A A    K T V K F K C P S S            G T P N P T L R W L    K N G K E F K P D H    R I G G Y K V R Y A    T W S I I M D S V V            P S D K G N Y T C I    V E N E Y G S I N H    T Y Q L D V V E R S    P H R P I L Q A G L            P A N K T V A L G S    N V E F M C K V Y S    D P Q P H I Q W L K    H I E V N G S K I G            P D N L P Y V Q I L    K T A G V N T T D K    E M E V L H L R N V    S F E D A G E Y T C            L A G N S I G L S H    H S A W L T V L E A    L E E R P A V M T S    P L Y L E         </p>
<b>Biological Activity</b>	Measured by its ability to inhibit FGF acidic-dependent proliferation of NIH 3T3 mouse fibroblast cells. The ED <sub>50</sub> for this effect is 28.13ng/mL, corresponding to a specific activity is 35549.2357 Unit/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	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.

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

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