

FGFR-3 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P74153
Synonyms:	Fibroblast growth factor receptor 3; FGFR-3; CD333; Mfr3; Sam3
Species:	Mouse
Source:	HEK293
Accession:	Q61851 (E21-Y367)
Gene ID:	14184
Molecular Weight:	60-90 kDa

PROPERTIES

AA Sequence	<pre> E P P G P E Q R V V R R A A E V P G P E P S Q Q E Q V A F G S G D T V E L S C H P P G G A P T G P T V W A K D G T G L V A S H R I L V G P Q R L Q V L N A S H E D A G V Y S C Q H R L T R R V L C H F S V R V T D A P S S G D D E D G E D V A E D T G A P Y W T R P E R M D K K L L A V P A A N T V R F R C P A A G N P T P S I S W L K N G K E F R G E H R I G G I K L R H Q Q W S L V M E S V V P S D R G N Y T C V V E N K F G S I R Q T Y T L D V L E R S P H R P I L Q A G L P A N Q T A I L G S D V E F H C K V Y S D A Q P H I Q W L K H V E V N G S K V G P D G T P Y V T V L K T A G A N T T D K E L E V L S L H N V T F E D A G E Y T C L A G N S I G F S H H S A W L V V L P A E E E L M E T D E A G S V Y </pre>
Biological Activity	Immobilized FGF basic at 5 µg/mL (100 µL/well) can bind Biotinylated FGFR-3. The ED ₅₀ for this effect is 50.77 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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. 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. 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-3 protein is a tyrosine-protein kinase that acts as a cell-surface receptor for fibroblast growth factors and is crucial for
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regulating cell proliferation, differentiation, and apoptosis. It plays a vital role in chondrocyte differentiation, proliferation, and apoptosis, as well as in normal skeleton development. FGFR-3 also regulates osteogenesis and postnatal bone mineralization in osteoblasts. It can promote apoptosis in chondrocytes but has also been implicated in cancer cell proliferation. Additionally, FGFR-3 is essential for the development of the inner ear and phosphorylates PLCG1, CBL, and FRS2. Ligand binding to FGFR-3 triggers various signaling cascades, including the production of diacylglycerol and inositol 1,4,5-trisphosphate through activation of PLCG1. Phosphorylation of FRS2 leads to the recruitment of GRB2, GAB1, PIK3R1, and SOS1, ultimately activating the RAS, MAPK1/ERK2, MAPK3/ERK1, and AKT1 signaling pathways. FGFR-3 also plays a role in vitamin D metabolism regulation. Aberrant signaling occurs when mutations result in constitutive kinase activation or impair normal FGFR3 maturation, internalization, and degradation. Overexpression or constitutive activation of FGFR-3 promotes the activation of STAT1, STAT5A, and STAT5B. Furthermore, FGFR-3 is involved in postnatal lung development.

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

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