

FGFR-1 alpha Protein, Human (HEK293, C-His)

Cat. No.:	HY-P700635
Synonyms:	rHuFGFR-1 α , Fc Chimera; BFGFR; CD331; FLT-2
Species:	Human
Source:	HEK293
Accession:	P11362 (R22-E376)
Gene ID:	2260
Molecular Weight:	41.6 kDa

PROPERTIES

AA Sequence

R P S P T L P E Q A	Q P W G A P V E V E	S F 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 A E S N R T R I	T G E E V E V Q D S	V 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 M 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

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 μ m filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.

Endotoxin Level <1 EU/ μ g, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH₂O.

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 alpha, a tyrosine-protein kinase, functions as a cell-surface receptor for fibroblast growth factors and plays a pivotal role in regulating embryonic development, cell proliferation, differentiation, and migration. It is essential for normal

mesoderm patterning, proper axial organization during embryonic development, skeletogenesis, and the development of the gonadotropin-releasing hormone (GnRH) neuronal system. Upon ligand binding, FGFR-1 alpha 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. FGFR-1 alpha 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 FGFR-1 alpha signaling occurs through IL17RD/SEF and FGFR-1 alpha ubiquitination, internalization, and degradation.

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

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