

Recombinant Human FGFR3 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50331

Size: 10ug, 100ug

Protein Name: Fibroblast growth factor receptor 3 (FGFR-3) (EC 2.7.10.1) (CD antigen CD333)

Synonym: FGFR3, JTK4

UniProt ID: P22607

UniProt Link: www.uniprot.org/uniprotkb/P22607/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 806 AA

Molecular Weight: 88 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGAPACALALCVAVAIVAGASSESLGTEQRRVVGRAAEVPGPEPGQQEQLVFGSGDAVELSCPPPG
GGPMGPTVWVKDGTGLVPSERVLVGPQRLQVLNASHEDSGAYSCRQRLTQRVLCHFVSRVTDAP
SSGDDDEDEGEDEAEDTGVDTGAPYWTRPERMDKKLLAVPAANTVRFRCPAAGNPTPSISWLKNGRE
FRGEHRIGGIKLRHQQWSLVMEVSPDRGNYTCVVENKFGSIRQTYTLDVLERSPHRPILQAGLPA
NQTAVLGSDVEFHCKVYSDAQPHIQWLKHVEVNGSKVGPDPYVTVLKTAGANTTDKEVLSLH
NVTFEDAGEYTCLAGNSIGFSHSAWLVLPAEEELVEADEAGSVYAGILSYGVGFFLFILVVAAVTL
CRLRSPPKKGLGSPTVHKISRFLKRQVSLESNASMSNTPLVRIARLSSGEGPTLANVSELELPADP
KWELSRARLTGKPLGEGCFGQVMAEAIGIDKDRAAKPVTVAVKMLKDDATDKDLSDLVSEMEMM
KMIGKHKNIINLLGACTQGGPLYVLVEYAAKGNLREFLRARRPPGLDYSFDTCKPPEEQLTFKDLVSC
AYQVARGMEYLASQKCIHRDLAARNVLVTEDNVMKIADFGLARDVHNLDYYKTTNGRLPVKWMAP
EALFDRVYTHQSDVWSFGVLLWEIFTLGGSPYPGIPVEELFKLLKEGHRMDKPANCTHDLYMIMREC
WHAAPSQRPTFKQLVEDLDRVLTVTSTDEYLDLSAPFEQYSPGGQDTPSSSSSGDSDVFAHDLPP
APPSSGGSRT

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Fibroblast growth factor receptor 3 (FGFR-3) (EC 2.7.10.1) (CD antigen CD333) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Tyrosine-protein kinase that acts as a cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of cell proliferation, differentiation and apoptosis. Plays an essential role in the regulation of chondrocyte differentiation, proliferation and apoptosis, and is required for normal skeleton development. Regulates both osteogenesis and postnatal bone mineralization by osteoblasts. Promotes apoptosis in chondrocytes, but can also promote cancer cell proliferation. Required for normal development of the inner ear. Phosphorylates PLCG1, CBL and FRS2. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. Phosphorylation of FRS2 triggers recruitment of GRB2, GAB1, PIK3R1 and SOS1, and mediates activation of RAS, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Plays a role in the regulation of vitamin D metabolism. Mutations that lead to constitutive kinase activation or impair normal FGFR3 maturation, internalization and degradation lead to aberrant signaling. Over-expressed or constitutively activated FGFR3 promotes activation of PTPN11/SHP2, STAT1, STAT5A and STAT5B. Secreted isoform 3 retains its capacity to bind FGF1 and FGF2 and hence may interfere with FGF signaling.

Subcellular Localization: [Isoform 1]: Cell membrane; Single-pass type I membrane protein. Cytoplasmic vesicle. Endoplasmic reticulum. Note=The activated receptor is rapidly internalized and degraded. Detected in intracellular vesicles after internalization of the autophosphorylated receptor.; [Isoform 2]: Cell membrane ; Single-pass type I membrane protein .; [Isoform 3]: Secreted.; [Isoform 4]: Cell membrane ; Single-pass type I membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.