

Recombinant Human FLT3 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50337

Size: 10ug, 100ug

Protein Name: Receptor-type tyrosine-protein kinase FLT3 (EC 2.7.10.1) (FL cytokine receptor) (Fetal liver kinase-2) (FLK-2) (Fms-like tyrosine kinase 3) (FLT-3) (Stem cell tyrosine kinase 1) (STK-1) (CD antigen CD135)

Synonym: FLT3, CD135, FLK2, STK1

UniProt ID: P36888

UniProt Link: www.uniprot.org/uniprotkb/P36888/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 993 AA

Molecular Weight: 113 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPALARDGGQLPLLVFSA MIFGTITNQDLPVIKCVLINHKNNDSSVGKSSSYPMVSESPEDLGCALR
PQSSGTVYEA AAVEVDVSASITLQVLVDAPGNISCLWVFKHSSLNCQPHFDLQNRGVVSMVILKMTE
TQAGEYLLFIQSEATNYTILFTVSIRNTLLYTLRRPYFRKMENQDALVCISESVPEPIVEWVLCDSQGE
SCKEESPAVVKKEEKVLHELFGTDIRCCARNELGRECTRLFTIDLNQTPQTTL PQLFLKVGEP LWIRC
KAVHVNHGFGLTWELENKALEEGNYFEMSTYSTNRTMIRILFAFVSSVARNDTGYYTCSSSKHPSQS
ALVTIVEKGFINATNSS EYDQYEEFCFSVRFKAYPQIRCTWTF SRKSFPCEQKGLDNGYSISKFC
NHKHQPG EYIFHAENDDAQFTKMFTLNIRRPQVLA EASASQASCFS DGYPLPSWTWKKCSDKSPN
CTEEITEGVWNRKANRKVFGQWVSSSTLNMSEA IKGFLVKCCAYNSLGTSCETILLNSPGPFPIQD
NISFYATIGVCLLFIVVLTLLICHKYKKQFRYESQLQM VQVTGSSDNEYFYVDFREY EYDLKWEFPRE
NLEFGKVLGSGAFGKVMNATAYGISKTGVSIQVAVKMLKEKADSSEREALMSELKMMTQLGSHENIV
NLLGACTLSGPIYLIFEYCCYGDLLNYLR SKREKFHRTWTEIFKEHNFSFYPTFQSHPNSSMPGSREV
QIHPSDQISGLHGNSFHSEDEIEYENQKRLEEEEDLNVLTFEDLLCFAYQVAKGMEFLEFKSCVHR
DLAARNVLVTHGKVVKICDFGLARDIMSDSNYVVRGNARLPVKWMAPESLFEGIYTIKSDVWSYGILL
WEIFSLGVNPYPGIPVDANFYKLIQNGFKMDQPFYATEEIIYIMQSCWAFDSRKRPSFPNLTSFLGCQ
LADAEAMYQNVDGRVSECPHTYQNR RPF SREMDLGLLSPQAQVEDS

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 Receptor-type tyrosine-protein kinase FLT3 (EC 2.7.10.1) (FL cytokine receptor) (Fetal liver kinase-2) (FLK-2) (Fms-like tyrosine kinase 3) (FLT-3) (Stem cell tyrosine kinase 1) (STK-1) (CD antigen CD135) 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 the cytokine FLT3LG and regulates differentiation, proliferation and survival of hematopoietic progenitor cells and of dendritic cells. Promotes phosphorylation of SHC1 and AKT1, and activation of the downstream effector MTOR. Promotes activation of RAS signaling and phosphorylation of downstream kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes phosphorylation of FES, FER, PTPN6/SHP, PTPN11/SHP-2, PLCG1, and STAT5A and/or STAT5B. Activation of wild-type FLT3 causes only marginal activation of STAT5A or STAT5B. Mutations that cause constitutive kinase activity promote cell proliferation and resistance to apoptosis via the activation of multiple signaling pathways.

Subcellular Localization: Membrane; Single-pass type I membrane protein. Endoplasmic reticulum lumen. Note=Constitutively activated mutant forms with internal tandem duplications are less efficiently transported to the cell surface and a significant proportion is retained in an immature form in the endoplasmic reticulum lumen. The activated kinase is rapidly targeted for degradation.

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.