

Recombinant Rat MERTK Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52405

Size: 10ug, 100ug

Protein Name: Tyrosine-protein kinase Mer (EC 2.7.10.1) (Proto-oncogene c-Mer) (Receptor tyrosine kinase MerTK)

Synonym: MERTK, Mer

UniProt ID: P57097

UniProt Link: www.uniprot.org/uniprotkb/P57097/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 994 AA

Molecular Weight: 109 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MVLAPLLLGLLLLSALWNGGTAEKEEEIKPDQPFSGPLPGSLPADHRPFFAPHSSGDQLSPSQTGRS
HPAHTATPQMTSAASNLLPPVAFKNTIGRIVLSEHKSVKFNC SINIPNVYQETAGISWWKD GKELLGA
HHSITQFY PDEEGVSIIALFSITSVQRSDNGSYICKMKVNDREVSDPIYVEVQGLPYFTKQPESVNV
RNTAFNLTCQAVGPPEPVNIFWVQNSSRVNENPERSPSVLT VAGLTETAVFSCEAHNDKGLTVSKG
VQINIKVIPSPPT EVHILNSTAHSILVSWVPGFDGYSPLQNC SIQVKEADQLSNGSVMVFNTSASPHLY
EVQQLQALANYSVTVSCRNEIGWSAVSPWILASTTEGAPAVAPLNITVFLNESSNNLEIRWTKPPIKR
QDGELVGYRISHVWESAGTSKELSEEVSQNGSWAQVPVQMHNATCTVRIAVITKGGIGPFSEPV DV
AIPHSRV DYAPSSTPAPGNTESMLIILGCF CGFVLMGLILYLSLAIKRRVQETKFGGAFSEEDSQLV
NYRAKKSFCRRAIELTLQSLGVSEELQNKLEDVVVDRLNLLLGKVLGEGEFGSVM EGNLKDQEDGTSQ
KVAVKTMKLDNFSRLREIEEFLSEAACMKDFNHPNVIRLLGVCIELSSQGIPKPMVILPFM KYGDLHTFL
LYSRIESVPKSIPLQTLLKFMVDIAQGMEYLSSRNFLHRDLAARNCM LRDDMTVCVADFGLSKKIYSG
DYYRQGRIAKMPVKWIAIESLADRVYTSKSDVWAFGVTMWEIATRGMT PYPGVQNH EMYDYLLHGH
RLKQPEDCLDDLYEIMYSCWSADPLDRPTFSVLRQLQLEKLS ESLPDAQDKESIYINTQLLESCEGLAN
RSSLAGLDMNIDPDSIIASCTAGAAVSVM AEVHNNLHEERYILNGGNEEWEDVASTPFATVTAGK
DGVLPEDRLTKNGISWSHHSTLPLGSPSPDELLFADDSSGDSEVLM

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 Tyrosine-protein kinase Mer (EC 2.7.10.1) (Proto-oncogene c-Mer) (Receptor tyrosine kinase MerTK) 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: Receptor tyrosine kinase that transduces signals from the extracellular matrix into the cytoplasm by binding to several ligands including LGALS3, TUB, TULP1 or GAS6. Regulates many physiological processes including cell survival, migration, differentiation, and phagocytosis of apoptotic cells (efferocytosis). Ligand binding at the cell surface induces autophosphorylation of MERTK on its intracellular domain that provides docking sites for downstream signaling molecules. Following activation by ligand, interacts with GRB2 or PLCG2 and induces phosphorylation of MAPK1, MAPK2, FAK/PTK2 or RAC1. MERTK signaling plays a role in various processes such as macrophage clearance of apoptotic cells, platelet aggregation, cytoskeleton reorganization and engulfment. Functions in the retinal pigment epithelium (RPE) as a regulator of rod outer segments fragments phagocytosis. Also plays an important role in inhibition of Toll-like receptors (TLRs)-mediated innate immune response by activating STAT1, which selectively induces production of suppressors of cytokine signaling SOCS1 and SOCS3 (By similarity).

Subcellular Localization: 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.