

Recombinant Human TREM1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51015

Size: 10ug, 100ug

Protein Name: Triggering receptor expressed on myeloid cells 1 (TREM-1) (Triggering receptor expressed on monocytes 1) (CD antigen CD354)

Synonym: TREM1

UniProt ID: Q9NP99

UniProt Link: www.uniprot.org/uniprotkb/Q9NP99/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 234 AA

Molecular Weight: 26 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MRKTRLWGLLWMLFVSELRAATKLTEEKYELKEGQTL DVKCDYTL EKFASSQKAWQIIRDGEMPKTL
ACTERPSKN SHPVQVGRILEDYHDHGLLRVRMVNLQVEDSGLYQCVIYQPPKEPHMLFDRI RL VVT
KGFSGTPGSNENSTQNVYKIPPTTTKALCPLYTSPRTVTQAPPKSTADVSTPDSEINLTNVTDIIRVPV
FNIVILLAGGFLSKSLVFSVLFAVTLRSFVP

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 Triggering receptor expressed on myeloid cells 1 (TREM-1) (Triggering receptor expressed on monocytes 1) (CD antigen CD354) 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: [Isoform 1]: Cell surface receptor that plays important roles in innate and adaptive immunity by amplifying inflammatory responses (PubMed:10799849, PubMed:21393102). Upon activation by various ligands such as PGLYRP1, HMGB1 or HSP70, multimerizes and forms a complex with transmembrane adapter TYROBP/DAP12 (PubMed:17568691, PubMed:25595774, PubMed:29568119). In turn, initiates a SYK-mediated cascade of tyrosine phosphorylation, activating multiple downstream mediators such as BTK, MAPK1, MAPK3 or phospholipase C-gamma (PubMed:14656437, PubMed:21659545). This cascade promotes the neutrophil- and macrophage-mediated release of pro-inflammatory cytokines and/or chemokines, as well as their migration and thereby amplifies inflammatory responses that are triggered by bacterial and fungal infections (PubMed:17098818, PubMed:17568691). By also promoting the amplification of inflammatory signals that are initially triggered by Toll-like receptor (TLR) and NOD-like receptor engagement, plays a major role in the pathophysiology of acute and chronic inflammatory diseases of different etiologies including septic shock and atherosclerosis (PubMed:11323674, PubMed:21393102).; [Isoform 2]: Acts as a decoy receptor, counterbalancing TREM1 pro-inflammatory activity through the neutralization of its ligand.

Subcellular Localization: [Isoform 1]: Cell membrane ; Single-pass type I membrane protein .
Note=Recruited to lipid rafts when activated.; [Isoform 2]: Secreted .

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.