

Recombinant Human TCAM1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50950

Size: 10ug, 100ug

Protein Name: TIR domain-containing adapter molecule 1 (TICAM-1) (Proline-rich, vinculin and TIR domain-containing protein B) (Putative NF-kappa-B-activating protein 502H) (Toll-interleukin-1 receptor domain-containing adapter protein inducing interferon beta) (MyD88-3) (TIR domain-containing adapter protein inducing IFN-beta)

Synonym: TICAM1, PRVTIRB, TRIF

UniProt ID: Q8IUC6

UniProt Link: www.uniprot.org/uniprotkb/Q8IUC6/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 712 AA

Molecular Weight: 76 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MACTGPSLPSAFDILGAAGQDKLLYLKHKLKTPRPGCQGQDLLHAMVLLKLGQETEARISLEALKAD
AVARLVARQWAGVDSTEDPEEPPDVSWAVARLYHLLAEKLCPASLRDVAYQEAVRTLSSRDDHRL
GELQDEARNRCGWDIAGDPGSIRTLQSNLGCLPPSSALPSGTRSLPRPIDGVSDWSQGCSLRSTGS
PASLASNLEISQSPTMPFLSLHRSPHGPSKLCDDPQASLVPEVPVGGCQEPEEMSWPPSGEIASPP
ELPSSPPPGLPEVAPDATSTGLPDTAAPETSTNYPVECTEGSAGPQSLPLPILEPVKNPCSVKDQT
PLQLSVEDTTSPNTKPCPPTPTTPETSPPPPPPPPSSTPCSAHLTPSSLFPSSLESSEKQFYNFVIL
HARADEHIALRVREKLEALGVDPGATFCEDFQVPGRGELSCLQDAIDHSAFIILLTNSNFDCLSLHQ
VNQAMMSNLTRQGSPPDCVIPFLPLESSPAQLSSDTASLLSGLVRLDEHSQIFARKVANTFKPHRLQA
RKAMWRKEQDTRALREQSQHLDGERMQAAALNAAYSAYLQSYLSYQAQMEQLQVAFGSHMSFGT
GAPYGARMPFGGQVPLGAPPPFPTWPGCPQPPPLHAWQAGTPPPSPQPAAFPQSLPFPQSPAF
PTASPAPPQSPGLQPLIIHHAQMVQLGLNNHMWNQRGSGAPEDKTQEA

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 TIR domain-containing adapter molecule 1 (TICAM-1) (Proline-rich, vinculin and TIR domain-containing protein B) (Putative NF-kappa-B-activating protein 502H) (Toll-interleukin-1 receptor domain-containing adapter protein inducing interferon beta) (MyD88-3) (TIR domain-containing adapter protein inducing IFN-beta) 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: Involved in innate immunity against invading pathogens. Adapter used by TLR3, TLR4 (through TICAM2) and TLR5 to mediate NF-kappa-B and interferon-regulatory factor (IRF) activation, and to induce apoptosis (PubMed:12471095, PubMed:12539043, PubMed:14739303, PubMed:28747347, PubMed:35215908, PubMed:31511519). Ligand binding to these receptors results in TRIF recruitment through its TIR domain (PubMed:12471095, PubMed:12539043, PubMed:14739303). Distinct protein-interaction motifs allow recruitment of the effector proteins TBK1, TRAF6 and RIPK1, which in turn, lead to the activation of transcription factors IRF3 and IRF7, NF-kappa-B and FADD respectively (PubMed:12471095, PubMed:12539043, PubMed:14739303). Phosphorylation by TBK1 on the pLxIS motif leads to recruitment and subsequent activation of the transcription factor IRF3 to induce expression of type I interferon and exert a potent immunity against invading pathogens (PubMed:25636800). Component of a multi-helicase-TICAM1 complex that acts as a cytoplasmic sensor of viral double-stranded RNA (dsRNA) and plays a role in the activation of a cascade of antiviral responses including the induction of pro-inflammatory cytokines (By similarity).

Subcellular Localization: Cytoplasmic vesicle, autophagosome . Cytoplasm, cytosol . Mitochondrion . Note=Colocalizes with UBQLN1 in the autophagosome (PubMed:21695056). Colocalizes in the cytosol with DDX1, DDX21 and DHX36. Colocalizes in the mitochondria with DDX1 and poly(I:C) RNA ligand. The multi-helicase-TICAM1 complex may translocate to the mitochondria upon poly(I:C) RNA ligand stimulation (By similarity).

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.