

Recombinant Rat CD40L Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52620

Size: 10ug, 100ug

Protein Name: CD40 ligand (CD40-L) (Tumor necrosis factor ligand superfamily member 5) (CD antigen CD154) [Cleaved into: CD40 ligand, membrane form; CD40 ligand, soluble form (sCD40L)]

Synonym: Cd40lg, Cd40l, Tnfsf5

UniProt ID: Q9Z2V2

UniProt Link: www.uniprot.org/uniprotkb/Q9Z2V2/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 260 AA

Molecular Weight: 29 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MIETYSQPSPRSVATGLPASMKIFMYLLTVFLITQMIGSVPPFAVYLHRRLDKVEEEASLHEDFVFKKL
KRCNKGEGSLNCEEMRRQFEDLVKDISLNKEEKKEKSFEMQRGDEDPQIAAHVVSEANSNAAS
VLQWAKKGYTMTKSNLVLNENRQLTVKREGLYYVTQVTFCSNREPLSQRPFIVSLWLKPSSGSE
RILLRAANTHSSSKLCEQQSIHLGGVFELQAGASVFVNVTEASQVIHGIGFSSIGLLKL

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 CD40 ligand (CD40-L) (Tumor necrosis factor ligand superfamily member 5) (CD antigen CD154) [Cleaved into: CD40 ligand, membrane form; CD40 ligand, soluble form (sCD40L)] 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: Cytokine that acts as a ligand to CD40/TNFRSF5 (By similarity). Costimulates T-cell proliferation and cytokine production (By similarity). Its cross-linking on T-cells generates a costimulatory signal which enhances the production of IL4 and IL10 in conjunction with the TCR/CD3 ligation and CD28 costimulation (By similarity). Induces the activation of NF-kappa-B (By similarity). Induces the activation of kinases MAPK8 and PAK2 in T-cells (By similarity). Mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL4 (By similarity). Involved in immunoglobulin class switching (By similarity).; [CD40 ligand, soluble form]: Acts as a ligand for integrins, specifically ITGA5:ITGB1 and ITGAV:ITGB3; both integrins and the CD40 receptor are required for activation of CD40-CD40LG signaling, which have cell-type dependent effects, such as B-cell activation, NF-kappa-B signaling and anti-apoptotic signaling.

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein . Cell surface .; [CD40 ligand, soluble form]: Secreted . Note=Release of soluble CD40L from platelets is partially regulated by GP IIb/IIIa, actin polymerization, and a matrix metalloproteinases (MMP) inhibitor-sensitive pathway.

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.