Recombinant CD40L protein (His tag)

Catalog Number	542254
Synonyms	CD40-L; T-cell antigen Gp39; TNF-related activation protein; TRAP; Tumor necrosis factor ligand superfamily member 5; CD antigen CD154; sCD40L
Species	Human
Expression System	E. coli
Accession	P29965
Molecular Weight	Predictes a molecular mass of 25.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	47-261
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 47-261 aa (P29965) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human CD40 Ligand (CD40-L) Fragment (aa 47-261) is a high-purity protein designed for studying T-cell costimulation, B-cell activation, and NF-kappa-B signaling. This fragment fully encompasses the TNF Homology Domain (THD), making it an ideal tool for investigating domain-specific functions in immune regulation and cellular signaling pathways. CD40 ligand (CD40-L), also known as CD154, is a cytokine that acts as a ligand for CD40/TNFRSF5, playing a critical role in immune responses. It costimulates T-cell proliferation and cytokine production, enhances IL4 and IL10 production when cross-linked with TCR/CD3 and CD28, and induces NF-kappa-B activation. The protein also mediates B-cell proliferation and IgE production in the presence of IL4, and is involved in immunoglobulin class switching. CD40-L exists in membrane-bound and soluble forms, with the soluble form acting as a ligand for integrins ITGA5:ITGB1 and ITGAV:ITGB3, requiring both integrins and CD40 for cell-type dependent effects such as B-cell activation and anti-apoptotic signaling. The full-length protein is localized to the cell membrane as a single-pass type II membrane protein and is also present on the cell surface, while the soluble form is secreted and its release from platelets is regulated by GP IIb/IIIa, actin polymerization, and matrix metalloproteinases.