

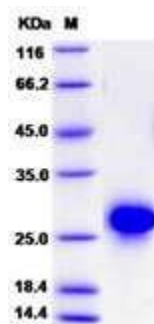
**Product Data Sheet**

□ Cat# HCD4015-N-10	Recombinant (E. coli) Human CD40 (aa: 21-193, C-terminal His Tag, >95% Pure)	Size:10 ug
□ Cat# RCD4015-N-10	Recombinant (E. coli) Rat CD40 (aa: 21-193, C-terminal His Tag, >95% Pure)	Size: 10 ug

CD40 ligand or CD40L also called CD154 is a protein that is primarily expressed on activated T cells and is a member of the TNF superfamily of molecules. It binds to CD40 on antigen-presenting cells (APC), which leads to many effects depending on the target cell type. In total CD40L has three binding partners: CD40,  $\alpha 5\beta 1$  integrin and  $\alpha 11\beta 3$ . CD154 acts as a costimulatory molecule and is particularly important on a subset of T cells called T follicular helper cells (TFH cells). On TFH cells, CD154 promotes B cell maturation and function by engaging CD40 on the B cell surface and therefore facilitating cell-cell communication. A defect in this gene results in an inability to undergo immunoglobulin class switching and is associated with hyper IgM syndrome.

Cytokine that binds to CD40/TNFRSF5 Costimulates T-cell proliferation and cytokine production. 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. Induces the activation of NF-kappa-B and kinases MAPK8 and PAK2 in T-cells. Induces tyrosine phosphorylation of isoform 3 of CD28. Mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL4. Release of soluble CD40L from platelets is partially regulated by GP IIb/IIIa, actin polymerization, and matrix metalloproteinases (MMP) inhibitor-sensitive pathway.

**Source and Forms of Protein**



The recombinant human CD40L expressed in Human Cells (> 95% purity) consists of 184 amino acids with a predicted molecular mass of 20.7 kDa. As a result of glycosylation, rhCD40 migrates as an approximately 32 kDa band in SDS-PAGE under reducing conditions.

Lyophilized from sterile PBS, pH 7.4, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. SDS may crystallize in cold conditions. It should re-dissolve by warming before taking it from the stock. This preparation is not biologically active. It is suitable for ELISA as a standard or western blot +ve control. Do not freeze, thaw, or heat repeatedly.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4°C.

**Long-term:** at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and powder.

**Endotoxin:** <1.0 EU per ug of the protein determined by LAL method

**Recommended Usage**

**Western Blotting:** Purified CD40 is ~25 KDa. Load ~100-200 ng/lane for good visibility with appropriate antibodies.

**ELISA** (Perform serial dilution beginning from 10 ng to generate a standard curve. User must optimize conditions).

**Specificity & Cross-reactivity**

Human CD40: 95-99% conserved in most Monkey species

Rat CD40: 83% conserved in Mouse

\*This product is for in vitro research use only.

**Related Items from ADI**

Catalog#	Description
CD40F-100 conjugate	Mouse Monoclonal Anti-Human CD40-FITC conjugate
CD40F-25 conjugate	Mouse Monoclonal Anti-Human CD40-FITC conjugate
CD40P-100	Mouse Monoclonal Anti-Human CD40-PE conjugate
CD40P-25	Mouse Monoclonal Anti-Human CD40-PE conjugate
CD40PC-100 conjugate	Mouse Monoclonal Anti-Human CD40-PE-Cy5-conjugate
CD40PC-25 conjugate	Mouse Monoclonal Anti-Human CD40-PE-Cy5-conjugate
MA-20366	Mouse Monoclonal Anti-Human CD40
MCD040-B 3/23 (rat IgG2a)	Rat Monoclonal Anti-Mouse CD40, Biotin (Clone 3/23) (rat IgG2a)
MCD040-M 3/23 (rat IgG2a)	Rat Monoclonal Anti-Mouse CD40, Purified (Clone 3/23) (rat IgG2a)
MCD040-PE (rat IgG2b)	Rat Monoclonal Anti-Mouse CD40, PE (Clone 3/23) (rat IgG2b)
CD4011-A unlabeled	Rabbit Anti-Human CD40 IgG, affinity purified, unlabeled
HCD4015-N-10	Recombinant (E. coli) Human CD40 (aa: 21-193, C-terminal His Tag, >95% Pure)
HCD40L-15-N-10	Recombinant (E. coli) Human CD40L/TNFSF5 (aa:108-261, N-terminal His Tag, >95% Pure)
RCD4015-N-10	Recombinant (E. coli) Rat CD40 (aa: 21-193, C-terminal His Tag, >95% Pure)

HCD4015-N-10

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