

# Human CD40 Protein (Fc & AVI Tag), Biotinylated

Catalog Number: 10774-H41H-B



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

Bp50; CDW40; p50; TNFRSF5

### Protein Construction:

A DNA sequence encoding the human CD40 (NP\_001241.1) (Met1-Arg193) was expressed with a c-terminal Fc region of human IgG1 tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed.

**Source:** Human

**Expression Host:** Human Cells

## QC Testing

### Biotin/Protein Ratio:

0.7-1 as determined by the HABA assay.

**Purity:** > 95 % as determined by SDS-PAGE.

### Bio-activity:

Measured by its binding ability in a functional ELISA. Immobilized Fc-CD40L (Cat:10239-H01H) at 10 µg/mL (100 µL/well) can bind CD40-Fc-Avi (Cat:10774-H41H-B), the EC<sub>50</sub> of CD40-Fc-Avi (Cat:10774-H41H-B) is 40-80 ng/mL.

### Endotoxin:

<1.0 EU per µg protein as determined by the LAL method.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Glu 21

### Molecular Mass:

The recombinant human CD40 consists of 426 amino acids and predicts a molecular mass of 47.7 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

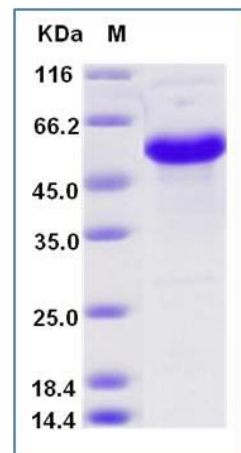
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

CD40, also known as TNFRSF5, is a member of the TNF receptor superfamily which are single transmembrane-spanning glycoproteins. CD40 protein plays an essential role in mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. CD40 protein is expressed in B cells, dendritic cells, macrophages, endothelial cells, and several tumor cell lines. Defects in CD40 result in hyper-IgM immunodeficiency type 3 (HIGM3). In addition, CD40/CD40L interaction is found to be necessary for amyloid-beta-induced microglial activation, and thus is thought to be an early event in Alzheimer disease pathogenesis.

## References

1. van Kooten C, *et al.* (2000). CD40-CD40 ligand. *J Leukoc Biol.* 67 (1): 2-17.
2. Bhushan A, *et al.* (2002). CD40:CD40L interactions in X-linked and non-X-linked hyper-IgM syndromes. *Immunol Res.* 24 (3): 311-24.
3. Chatzigeorgiou A, *et al.* (2009) CD40/CD40L signaling and its implication in health and disease. *Biofactors.* 35(6): 474-83.

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.**

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