

CD40 Protein, Human, Recombinant (His)

General Information

Synonyms:	CDW40;CD40 molecule, TNF receptor superfamily member 5;TNFRSF5;p50;Bp50
Protein Construction:	A DNA sequence encoding the human CD40 (NP_001241.1) extracellular domain (Met1-Arg193) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Glu 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P25942
Molecular Weight:	20.7 kDa (predicted); 32 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Immobilized Human CD40 His at 2 µg/mL (100 µL/well) can bind Human CD40 Ligand (ECD, hFc & AVI Tag), Biotinylated, the EC50 is 6-20 ng/mL. 2. Loaded Recombinant Human CD40 Protein, His Tag on His1K Biosensor, can bind Recombinant Human CD40 Ligand Protein, hFc Tag with an affinity constant of 5.88 nM as determined in BLI assay (Routinely tested).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. Cancer Immunotherapy Co-stimulatory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: Antibodies Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: FCM Antibodies Immune Checkpoint Detection: ICC Antibodies Immune Checkpoint Detection: IP Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

Reference

- van Kooten C, et al. (2000). CD40-CD40 ligand. *J Leukoc Biol.* 67 (1): 2-17.
- Bhushan A, et al. (2002). CD40:CD40L interactions in X-linked and non-X-linked hyper-IgM syndromes. *Immunol Res.* 24 (3): 311-24.
- Chatzigeorgiou A, et al. (2009) CD40/CD40L signaling and its implication in health and disease. *Biofactors.* 35(6): 474-83.
- Li R, et al. (2009) Expression of CD40 and CD40L in Gastric Cancer Tissue and Its Clinical Significance. *Int J Mol Sci.* 10 (9): 3900-17.
- Lievens D, et al. (2009) The multi-functionality of CD40L and its receptor CD40 in atherosclerosis. *Thromb Haemost.* 102(2): 206-14.

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