

Active Recombinant Human CD40 protein, Fc/Avi-tagged, Biotinylated

Cat. No. CD40-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human CD40(Glu21-Arg193) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Glu21-Arg193
Description	CD40, also known as TNFRSF5, is a 45-50 kDa type I transmembrane glycoprotein member of the TNF receptor superfamily (1). Mature human CD40 consists of a 173 amino acid (aa) extracellular domain, a transmembrane domain, and a 62 aa cytoplasmic domain (2). The extracellular domain of human CD40 shares 58% and 56% aa sequence identity with mouse and rat CD40, respectively. An antagonistic soluble human CD40 splice variant contains an alternate sequence within the extracellular and transmembrane domains and lacks a cytoplasmic domain (3). CD40 is expressed on the surface of B cells, dendritic cells, macrophages, monocytes and platelets, as well as endothelial and epithelial cells (4, 5). Interaction of CD40 with its ligand, CD40 Ligand, leads to the aggregation of CD40 molecules resulting in the initiation of bidirectional intracellular signaling in both CD40 and CD40 Ligand expressing cells (6). CD40 ligation by CD40 Ligand promotes B cell activation and T cell-dependent humoral responses (7, 8). CD40 serves multiple functions in both hematopoietic and epithelial cancers and is a target for tumor immunotherapy (9, 10).

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Dysregulation of CD40/CD40 Ligand expression and interactions contributes to the immune deficiency associated with HIV infection and AIDS (11, 12). It is also implicated in the pathology of multiple cardiovascular diseases including atherosclerosis, atherothrombosis, and restenosis (13, 14).

Predicted N Terminal	Glu21
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD40 Fc (HEK293-expressed) mobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Human CD40 Fc Chimera Avi-tag that produces 50% optimal binding is 40-320 ng/mL.
Molecular Mass	61-66 kDa, under reducing conditions
Endotoxin	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.

Conjugation Biotin

GENE INFORMATION

Gene Name [CD40 CD40 molecule, TNF receptor superfamily member 5 \[Homo sapiens \]](#)

Official Symbol [CD40](#)

Synonyms CD40; CD40 molecule, TNF receptor superfamily member 5; TNFRSF5, tumor necrosis factor receptor superfamily, member 5; tumor necrosis factor receptor superfamily member 5; Bp50; p50; CD40L receptor; CD40 type II isoform; B cell-associated molecule; B cell surface antigen CD40; B-cell surface antigen CD40; CD40 antigen (TNF receptor superfamily member 5); tumor necrosis factor receptor superfamily, member 5; nerve growth factor receptor-related B-lymphocyte activation molecule; CDW40; TNFRSF5; MGC9013;

Gene ID [958](#)

mRNA Refseq [NM_001250](#)

Protein Refseq [NP_001241](#)

MIM [109535](#)

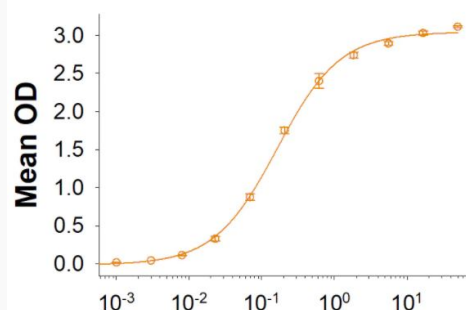
UniProt ID [P25942](#)

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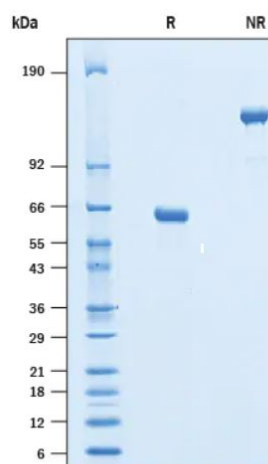
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Binding Activity



SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.