

Recombinant Human CD40 Molecule, TNF Receptor Superfamily Member 5

Cat. No. CD40-4980H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CD40 was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	Human
Description	CD40, a member of the TNF receptor family, is a cell surface protein expressed on B cells, dendritic cells, monocytes, thymic epithelial cells and, at low levels, on T cells. Signaling through CD40 plays an important role in the proliferation and differentiation of B cells, and is critical for immunoglobulin (Ig) class switching. The membrane-anchored CD40-Ligand is expressed almost exclusively on activated CD4+ T lymphocytes. Failure to express CD40L leads to "immunodeficiency with hyper-IgM", a disease characterized by failure to produce IgG, IgA and IgE. The human CD40L gene codes for a 261 amino acid type II transmembrane protein, which contains a 22 amino acid cytoplasmic domain, a 24 amino acid transmembrane domain, and a 215 amino acid extracellular domain. The soluble form of CD40L is an 18 kDa protein comprising the entire TNF homologous region of CD40L and is generated in vivo by an intracellular proteolytic processing of the full length CD40L.
Form	Sterile filtered through a 0.2 um filter. Lyophilized from 10 mM Na₃PO₄, pH 7.5. Reconstitute in 5-10 mM Na₃PO₄, pH 7.5 to a concentration of 0.1-1.0 mg/ml.

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Purity	>98% pure by SDS PAGE and HPLC
Sequence	Region of CD40 protein corresponding to amino acids MQKGDQNPQI AAHVISEASS KTTSVLQWAE KGYTMSNNL VTLENGKQLT VKRQGLYYIY AQVTFCNRE ASSQAPFIAS LWLKSPGRFE RILLRAANTH SSAKPCGQQS IHLGGVFELQ PGASVFNVT DPSQVSHGTG FTSFGLLKL.
Molecular Mass	16.3 kDa
Applications	Numerous applications are possible with this product and should be tested by the end user under their own laboratory conditions
Endotoxin Levels	Endotoxin level is less than 0.1 ng per ug (1 EU/ug).
Storage	Store at 4 deg C until reconstitution. Following reconstitution aliquot and freeze at -20 deg C for long term storage. Avoid repeated freeze/thaw cycles.

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; p50; Bp50; CDW40; MGC9013; TNFRSF5; CD40 antigen; CD40 type II isoform; CD40L receptor; B cell surface antigen CD40; CD40 antigen (TNF receptor superfamily member 5); nerve growth factor receptor-related B-lymphocyte activation molecule; tumor necrosis factor receptor superfamily, member 5; B-cell surface antigen CD40; OTTHUMP00000031699; OTTHUMP 00000031700
Gene ID	958

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mRNA Refseq	NM_001250
Protein Refseq	NP_001241
MIM	109535
UniProt ID	P25942
Chromosome Location	20q12-q13.2
Pathway	Adaptive Immunity Signaling; Allograft rejection; Asthma; Autoimmune thyroid disease; CD40/CD40L signaling; Cell adhesion molecules (CAMs); Cytokine-cytokine receptor interaction; HTLV-I infection; IL-6 Signaling Pathway; Immune System; Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell; Inflammatory Response Pathway; Intestinal immune network for IgA production; Malaria; NLR proteins; Primary immunodeficiency
Function	enzyme binding; receptor activity; protein binding; signal transducer activity
Rendering based on PDB 1CDF.	