

Recombinant Mouse CD40 Antigen, Fc-His

Cat. No. Cd40-1715M **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Mouse CD40 was expressed in NSO cells. The DNA sequence encoding the extracellular domain of CD40 was fused to the carboxy-terminal 6X his-tagged Fc region of human IgG1 via a peptide linker.

Species Mouse

Source Mammalian Cells

Description CD40 is a costimulatory protein found on antigen presenting cells and is required for their activation. The binding of CD154 (CD40L) on TH cells to CD40 activates antigen presenting cells and induces a variety of downstream effects. The protein encoded by this gene is a member of the TNF-receptor superfamily. This receptor has been found to be essential 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. AT-hook transcription factor AKNA is reported to coordinately regulate the expression of this receptor and its ligand, which may be important for homotypic cell interactions. Adaptor protein TNFR2 interacts with this receptor and serves as a mediator of the signal transduction. The interaction of this receptor and its ligand is found to be necessary for amyloid-beta-induced microglial activation, and thus is thought to be an early event in Alzheimer disease pathogenesis. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

Molecular Weight The predicted molecular weight of Recombinant Mouse CD40 is Mr 46 kDa. However,

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	the actual molecular weight as observed by migration on SDS Page is Mr 58-61 kDa.
State Of Matter	Lyophilized.
Purity	>90% by SDS Page and analyzed by silver stain.
Formulation	This recombinant protein was 0.2 µm filtered and lyophilized from modified Dulbecco's phosphate buffered saline (1X PBS) pH 7.2 – 7.3 with no calcium, magnesium, or preservatives.
Endotoxin	<1.0 EU/g as determined by the LAL method.
Biological Activity	The biological activity of Mouse CD40 was determined by its ability to inhibit rmCD40 ligand-induced B cell proliferation. The expected ED50 for this effect is typically 0.1-0.3 µg/ml in the presence of 100 ng/ml recombinant mouse CD40 ligand.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles. See Product Insert for exact lot specific storage instructions.

GENE INFORMATION

Gene Name	Cd40 CD40 antigen [Mus musculus]
Synonyms	Cd40; CD40 antigen; IGM; p50; Bp50; GP39; IMD3; TRAP; HIGM1; T-BAM; Tnfrsf5; AI326936; OTTMUSP00000017667; OTTMUSP00000017739; T-cell differentiation antigen; tumor necrosis factor receptor superfamily, member 5
Gene ID	21939

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mRNA Refseq	NM_011611
Protein Refseq	NP_035741
UniProt ID	P27512
Chromosome Location	2 H3; 2 97.0 cM
Pathway	Allograft rejection; Asthma; Autoimmune thyroid disease; Cell adhesion molecules (CAMs); Cytokine-cytokine receptor interaction; Primary immunodeficiency; Systemic lupus erythematosus; Toll-like receptor signaling pathway
Function	receptor activity

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