

Recombinant Rhesus macaque CD40 protein, His-tagged

Cat. No. CD40-741R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rhesus macaque CD40 protein (Glu21-Arg193), fused to His tag at C-terminus, was expressed in human 293 cells (HEK293).
Species	Rhesus macaque
Source	HEK293
ProteinLength	173
Description	CD40 is also known as TNFRSF5, Bp50, CDW40, MGC9013, TNFRSF5 and p50, is a member of the TNF receptor superfamily which are single transmembrane-spanning glycoproteins, and 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 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. CD40 contains 4 cysteine-rich repeats in the extracellular domain, and is expressed in B cells, dendritic cells, macrophages, endothelial cells, and several tumor cell lines. The extracellular domain has the cysteine-rich repeat regions, which are characteristic for many of the receptors of the TNF superfamily. Interaction of CD40 with its ligand, CD40L, leads to aggregation of CD40 molecules, which in turn interact with cytoplasmic components to initiate signaling pathways. Early studies on the CD40-CD40L system revealed its role in humoral immunity. Defects in CD40 result in hyper-IgM immunodeficiency type 3

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(HIGM3), an autosomal recessive disorder characterized by an inability of B cells to undergo isotype switching, as well as an inability to mount an antibody-specific immune response, and a lack of germinal center formation.

Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 21.1 kDa. The protein migrates as 30-34 kDa under reducing (R) condition (SDS-PAGE).
Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	CD40
Official Symbol	CD40
Synonyms	Bp50, CDW40, TNFRSF5, p50

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Gene ID	707749
mRNA Refseq	NM_001265862.1
Protein Refseq	NP_001252791.1
UniProt ID	F6SNI1

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