



Synonym

CD40,Bp50,CDW40,MGC9013,TNFRSF5,p50

Source

Rhesus macaque CD40, Fc Tag(CD0-C5259) is expressed from human 293 cells (HEK293). It contains AA Glu 21 - Arg 193 (Accession # [NP_001252791.1](#)).
Predicted N-terminus: Glu 21

Molecular Characterization

CD40(Glu 21 - Arg 193) NP_001252791.1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 45.9 kDa. The protein migrates as 50-60kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in Tris, Glycine and NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

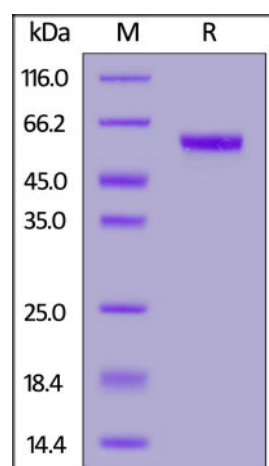
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



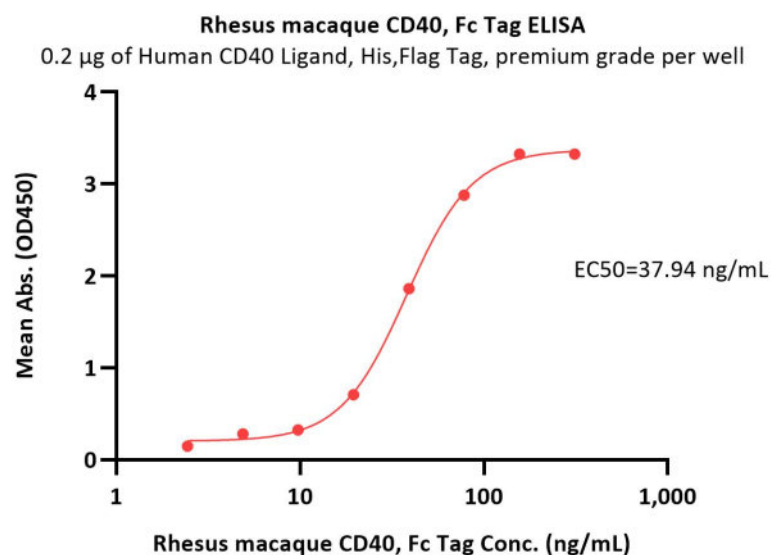
Rhesus macaque CD40, Fc Tag on SDS-PAGE under reducing (R) condition.

The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA

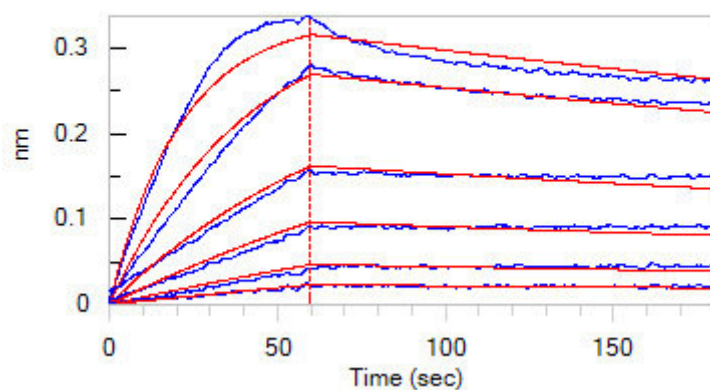
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Immobilized Human CD40 Ligand, His,Flag Tag, premium grade (Cat. No. CDL-H52Db) at 2 µg/mL (100 µL/well) can bind Rhesus macaque CD40, Fc Tag (Cat. No. CD0-C5259) with a linear range of 2-39 ng/mL (QC tested).

Bioactivity-BLI



Loaded Rhesus macaque CD40, Fc Tag (Cat. No. CD0-C5259) on Protein A Biosensor, can bind Human CD40 Ligand, His,Flag Tag, premium grade (Cat. No. CDL-H52Db) with an affinity constant of 0.829 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

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 (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.

Clinical and Translational Updates

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