

# Canine CD40 / TNFRSF5 Protein, His Tag (MALS verified)

Catalog # CD0-C52Hc



BIOSYSTEMS  
**Acro**

Surprise Inside!

## Synonym

CD40, Bp50, CDW40, MGC9013, TNFRSF5, p50

## Source

Canine CD40 Protein, His Tag (CD0-C52Hc) is expressed from human 293 cells (HEK293). It contains AA Glu 21 - Ala 194 (Accession # [Q7YRL5](#)).

Predicted N-terminus: Glu 21

## Molecular Characterization

CD40(Glu 21 - Ala 194)  
Q7YRL5

Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 20.9 kDa. The protein migrates as 30-35 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 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.**

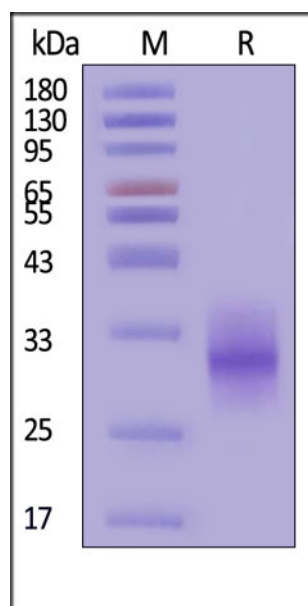
This product is stable after storage at:

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

## ACRO Quality Management System

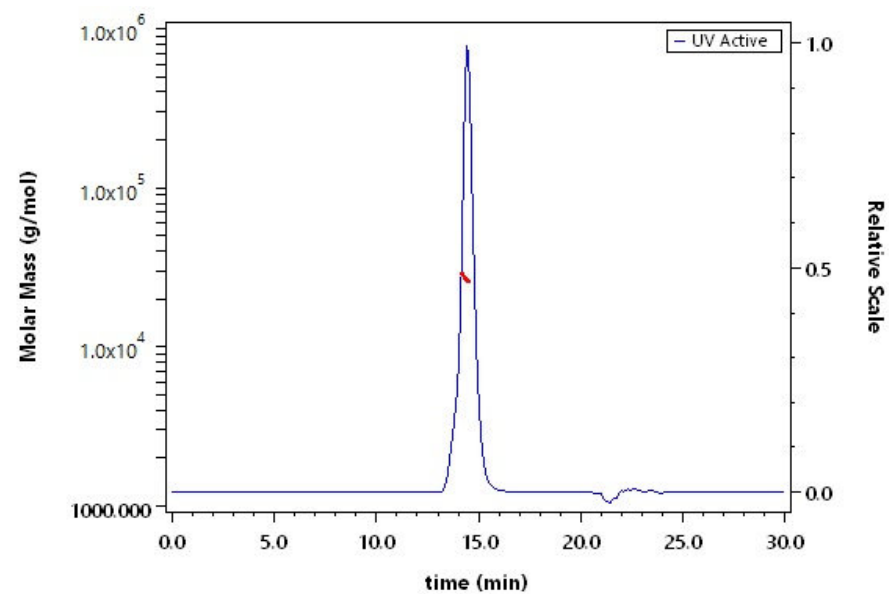
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

## SDS-PAGE



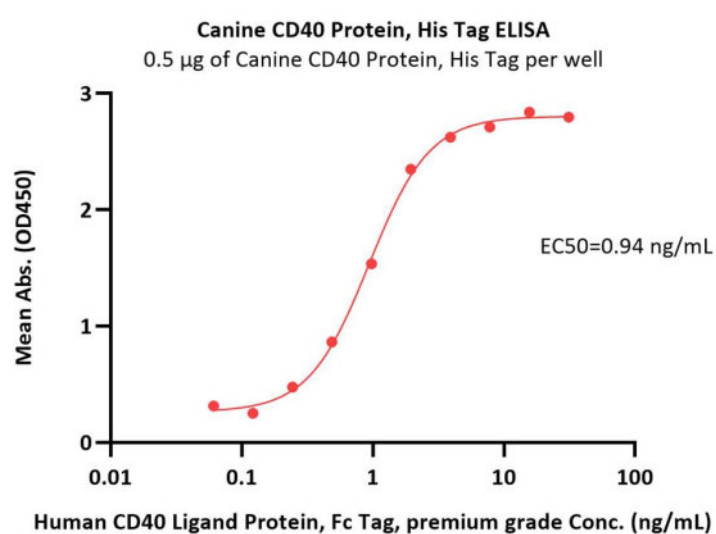
Canine CD40 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## SEC-MALS



The purity of Canine CD40 Protein, His Tag (Cat. No. CD0-C52Hc) is more than 90% and the molecular weight of this protein is around 20-30 kDa verified by SEC-MALS.

## Bioactivity-ELISA



Immobilized Canine CD40 Protein, His Tag (Cat. No. CD0-C52Hc) at 5 µg/mL (100 µL/well) can bind Human CD40 Ligand Protein, Fc Tag, premium grade (Cat. No. CDL-H5269) with a linear range of 0.06-2 ng/mL (QC 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.

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