

# Rabbit Anti-Human CD40 Molecule, TNF Receptor Superfamily Member 5 Monoclonal Antibody

Cat. No. CAB11500RH Lot. No. (See product label)

## SPECIFICATION

### Product Overview

Rabbit monoclonal antibody to human CD40 molecule, TNF receptor superfamily member 5.

### Species

Human

### Source

Rabbit

### Antigen Description

Human tumor necrosis factor receptor superfamily member 5, also known as CD40 and TNFRSF5, 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 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 cognate interaction between CD40 and CD40 ligand (CD154) on T cells activates NF-kappa B, Jun N-terminal kinase, and Janus kinase signal transducers and activators of transcription pathways. Several different TRAF proteins (Adaptor proteins) have been identified to serve as mediators of the signal transduction. In addition, CD40 / CD40L interaction is found to be necessary for amyloid-beta-induced microglial activation, and thus is thought to be an early event in Alzheimer disease pathogenesis. 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

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	antibody-specific immune response, and a lack of germinal center formation.
<b>Specificity</b>	Human CD40 / TNFRSF5 / Bp50. No cross-reactivity in ELISA with Human CD27 / TNFRSF7, Mouse CD27 / TNFRSF7, Human CD30 / TNFRSF8, Human DR6 / TNFRSF21, Human CD137 / 4-1BB, Human TNFRSF1B / CD120b, Human HVEM / TNFRSF14, Mouse HVEM / TNFRSF14, Human RELT / TNFRSF19L, Human cell lysate (293 cell line).
<b>Immunogen</b>	Recombinant human CD40 protein
<b>Isotype</b>	Rabbit IgG
<b>Clone</b>	5
<b>Applications</b>	Western Blot; ELISA
<b>Dilution</b>	Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human CD40 in WB. Using a DAB detection system, the detection limit for human CD40 is approximately 0.5 ng/lane under non-reducing conditions. Use of this antibody under reducing conditions is not recommended. Direct ELISA: This antibody can be used at 0.1- 0.2 µg/mL with the appropriate secondary reagents to detect human CD40. The detection limit for human CD40 is 0.0049 ng/well.
<b>Preparation</b>	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant human CD40 extracellular domain.
<b>Format</b>	0.2 µm filtered solution in PBS with 5% trehalose
<b>Storage</b>	This antibody can be stored at 2-8 °C for one month without detectable loss of

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activity. Antibody products are stable for twelve months from date of receipt when stored at -20 °C to -70 °C. Preservative-Free.Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. 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; TNFRSF5,tumor necrosis factor receptor superfamily, member 5; tumor necrosis factor receptor superfamily member 5; Bp50; p50; CD40L receptor; CD40 type II isoform; B cell-associated molecule; B cell surface antigen CD40; B-cell surface antigen CD40; CD40 antigen (TNF receptor superfamily member 5); tumor necrosis factor receptor superfamily, member 5; nerve growth factor receptor-related B-lymphocyte activation molecule; CDW40; TNFRSF5; MGC9013;

**Gene ID** [958](#)

**mRNA Refseq** [NM\\_001250](#)

**Protein Refseq** [NP\\_001241](#)

**MIM** [109535](#)

**UniProt ID** [P25942](#)

**Chromosome Location** [20q12-q13.2](#)

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**Pathway**

Adaptive Immune System, organism-specific biosystem; Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem; Asthma, organism-specific biosystem; Asthma, conserved biosystem; Autoimmune thyroid disease, organism-specific biosystem; Autoimmune thyroid disease, conserved biosystem;

**Function**

enzyme binding; protein binding; receptor activity; signal transducer activity;

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