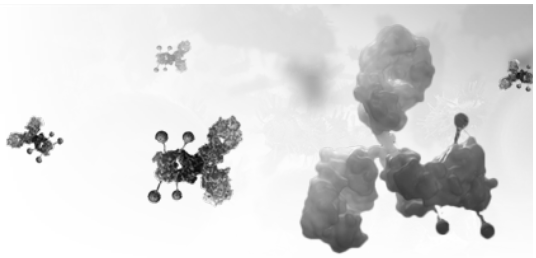

Mouse Anti-Human CD40 Monoclonal antibody, clone G28.5 (CABT-L4462)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	The G28.5 monoclonal antibody reacts with human CD40 also known as Bp50. CD40 is a 48 kDa type I transmembrane glycoprotein that belongs to the tumor necrosis factor receptor (TNFR) superfamily. CD40 is expressed broadly on antigen-presenting cells (APCs) such as dendritic cells, B cells, macrophages, and monocytes as well as non-immune endothelial cells, basal epithelial cells, and a range of tumors. Upon binding to its ligand CD154, CD40 acts as a costimulatory molecule for the activation of B cells, dendritic cells, monocytes, and other APCs. CD40 plays roles in B cell activation, differentiation, proliferation and Ig isotype switching as well as dendritic cell maturation. Agonistic CD40 monoclonal antibodies have been shown to activate APCs and promote anti-tumor T cell responses. The G28.5 antibody is an agonistic antibody that has been shown to activate CD40 expressing APCs.
Target	Human CD40
Immunogen	Human tonsillar lymphocytes
Isotype	IgG1, κ
Source/Host	Mouse
Species Reactivity	Human
Clone	G28.5
Purification	Protein G purified. Purity>95%. Determined by SDS-PAGE
Conjugate	Functional Grade
Applications	in vitro B cell stimulation, in vitro macrophage stimulation, FuncS, FC

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Molecular Weight	150 kDa
Format	0.2 μM filtered liquid. Purified from tissue culture supernatant in an animal free facility
Concentration	Lot specific
Size	5 mg
Buffer	PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free] Endotoxin level: <2EU/mg (<0.002EU/μg). Determined by LAL gel clotting assay Related dilution buffer: CABT-LB04
Preservative	None
Storage	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
Ship	Wet ice

BACKGROUND

Introduction	This gene is a member of the TNF-receptor superfamily. The encoded protein is a receptor on antigen-presenting cells of the immune system and is essential for 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. Mutations affecting this gene are the cause of autosomal recessive hyper-IgM immunodeficiency type 3 (HIGM3). Multiple alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported. [provided by RefSeq, Nov 2014]
Keywords	CD40;CD40 molecule, TNF receptor superfamily member 5;p50;Bp50;CDW40;TNFRSF5;tumor necrosis factor receptor superfamily member 5;CD40L receptor;CD40 type II isoform;B cell-associated molecule

GENE INFORMATION

Official Symbol	CD40 molecule, TNF receptor superfamily member 5
Synonyms	CD40; CD40 molecule, TNF receptor superfamily member 5; p50; Bp50; CDW40; TNFRSF5;

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	tumor necrosis factor receptor superfamily member 5; CD40L receptor; CD40 type II isoform; B cell-associated molecule
References	Bankert, K. C., et al. (2015). "Induction of an altered CD40 signaling complex by an antagonistic human monoclonal antibody to CD40." J Immunol 194(9): 4319-4327. PubMed;

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