

Anti-CD40 [3/23] Standard Size Ab01109-7.1

Isotype and Format: Rat IgG2a, Kappa

Clone Number: 3/23

Alternative Name(s) of Target: TNFRSF5; B-cell surface antigen CD40; Bp50; CD40; CD40L receptor; CDW40; MGC9013; T-cell differentiation antigen; Tumor necrosis factor receptor superfamily member 5; tumor necrosis factor receptor superfamily, member 5

UniProt Accession Number of Target Protein: P27512

Published Application(s): IP, FC, IHC

Published Species Reactivity: Mouse

Immunogen: This antibody was raised by immunising Lou rats with murine CD40-hy1-Fc according to the protocol by Hasbold et al. (Eur J Immunol. 1994)

Specificity: This antibody is specific for murine CD40, a 48 kD type I transmembrane glycoprotein also known as Bp50. It is a member of the tumor necrosis factor receptor (TNFR) superfamily and is expressed on B cells, basal epithelial cells, macrophages, follicular dendritic cells, endothelial cells, and a subset of CD34+ hematopoietic progenitors. CD40 regulates B cell development/maturation, Ig isotype switching and, in combination with other signals such as IL-4, protects B cells from surface Ig-induced apoptosis and promotes proliferation. Interaction of CD40 with its ligand CD154 (gp39), which is expressed on activated T cells, is important in costimulation and immune regulation.

Application Notes: This antibody has been used in various FACS analyses, for instance, to determine the immunoregulatory properties of primary colonic epithelial cells (Telega et al., 2000), to validate if eicosapentaenoic acid induces prolonged survival of cardiac allografts and generates regulatory T cells (Iwami et al., 2009), to characterise Siglec-H as a novel endocytic receptor expressed on murine plasmacytoid dendritic cell precursors (Zhang et al., 2006), to delineate the mechanisms for the activation of dendritic cells and induction of T cell responses by HPV 16 L1/E7 chimeric virus-like particles (Freyschmidt et al., 2004), and to investigate the role of epigenetic modification and immunomodulation in a murine prostate cancer model (Sulek et al., 2017). In a study by White et al. (J Immunol. 2011), the parental anti-mouse CD40 3/23 (rat IgG2a) mAb was first reformatted to mouse IgG1 (m1) and IgG2a (m2a) versions. The new variants were then utilised in immunohistochemistry, SPR, and in vitro phagocytosis assays and assessments for B cell proliferation, activation, and survival to confirm that interaction with FcγRIIB is critical for the agonistic activity of anti-CD40 amAb (White et al. 2011).

Antibody First Published in: Hasbold et al. Properties of mouse CD40: cellular distribution of CD40 and B cell activation by monoclonal anti-mouse CD40 antibodies Eur J Immunol. 1994 Aug;24(8):1835-42.

[PMID:7519998](#)

Note on publication:

Product Form

Size: 200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.