

## Anti-CD40L [MR1] Bulk Size Ab01087-2.3-BT

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric mouse antibody was made using the variable domain sequences of the original Hamster IgG format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Mouse IgG2a, [Fc Silent™](#), Kappa

**Clone Number:** MR1

**Alternative Name(s) of Target:** CD154; CD40 ligand; CD40-L; Cd40l; gp39; HIGM1; IGM; IMD3; Ly-62; Ly62; RP23-153G22.3; T-BAM; T-cell antigen Gp39; TNF-related activation protein; Tnfsf5; TRAP; Tumor necrosis factor ligand superfamily member 5.

**UniProt Accession Number of Target Protein:** P27548

**Published Application(s):** Blocking, functional assays, FC

**Published Species Reactivity:** Mouse

**Immunogen:** This antibody was raised by immunising Armenian hamsters with murine activated Th1 (D1.6) plasma membrane as described by Noelle et al (1992).

**Specificity:** This antibody is specific for murine CD40 ligand (CD40L), a 39 kDa transmembrane glycoprotein. CD40L is expressed transiently by activated T cells. Through its binding to CD40 on antigen presenting cells (APC) including B cells, monocytes/macrophages, and dendritic cells, it serves a crucial function in T cell-APC cognate interaction. CD40L-interaction with CD40 transduces signals for T-dependent B cell activation and induces B cells to enter the cell cycle.

**Application Notes:** This antibody has been used in various FACS analyses for diverse immunological applications, such as to indicate how naive CD4 T cells constitutively express CD40L and augment autoreactive B cell survival (Lesley et al, 2006), to prove that the interaction between natural killer cells and dendritic cells has a pivotal role in the sensitization phase of contact hypersensitivity (Shimizuhira et al, 2014), and to demonstrate that enhanced CD8 T cell responses through GITR-mediated costimulation could resolve chronic viral infection (Pascutti et al, 2015). This antibody has also been used for in vitro and in vivo blocking and functional studies, for instance, to indicate that the 39-kDa CD40L membrane protein expressed on activated Th is a binding protein for CD40 and functions to transduce the signal for Th-dependent B-cell activation (Noelle et al, 1992), and to demonstrate that the CD40L-CD40 pathway can augment the survival of autoantigen-engaged B cells in the absence of T cell activation (Lesley et al, 2006). Furthermore, this antibody clone (MR1) has been re-formatted as a rat IgG2b version and used for in vivo

functional assays to suggest that short pulses of anti-CD40L antibody therapy may still be useful in tolerance protocols even when the Fc region is disabled (Daley et al, 2008).

**Antibody First Published in:** Noelle et al. A 39-kDa protein on activated helper T cells binds CD40 and transduces the signal for cognate activation of B cells. Proc Natl Acad Sci U S A. 1992 Jul 15;89(14):6550-4. [PMID:1378631](#)

**Note on publication:** Describe the original generation of this antibody and its subsequent use in FACS, blocking and functional studies to indicate that the 39-kDa membrane protein expressed on activated Th is a binding protein for CD40 and functions to transduce the signal for Th-dependent B-cell activation.

## Product Form

**Size:** 1 mg Purified antibody in bulk size.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. 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.