Anti-CD40L [MR1] VivopureX 25 mg Ab01087-2.0-VXX

> 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, 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: 25 mg VivopureX products are produced at high purity (>98%), low endotoxin (<0.5 EU/mg) and are formulated without preservatives. These antibodies are chimerized to have an Fc domain matching their target species to reduce immunogenicity and give you the optimal effector function for your experiment. As a result VivopureX products are the ideal choice for in vivo research applications.

Purification: Protein A affinity purified

Supplied In: PBS only.

Storage Recommendation: All VivopureX products are formulated in PBS only without addition of preservatives. To ensure optimal storage and prevent microbial contamination, only open and dispense under sterile conditions.

Concentration: >=1mg (see vial label for exact conc)

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