

Product Information

Contents: Functional Grade Purified anti-mouse CD154 (CD40 Ligand, CD40L, gp39)

Catalog Number: 16-1541

Sizes: 50 ug, 100 ug, 500 ug

Formulation: Phosphate buffer pH 7.2, 150 mM NaCl, No NaN₃

Storage Conditions: Store at 4°C.

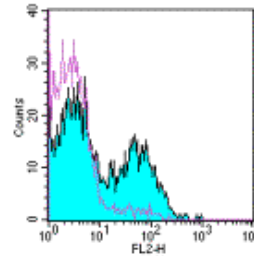
Avoid repeated freeze/thaw cycles.

KEEP CONTENT STERILE.

Endotoxin Level: Less than 0.001 ng/ug antibody, as determined by the LAL assay.

Clone: MR1

Isotype: Armenian Hamster IgG



Staining of 6 hour PMA+ Ionomycin activated T cells from BALB/c spleen with 0.125 µg of FG purified hamster IgG isotype control (cat.16-4914) (open histogram) or 0.125 µg of FG purified MR1. Biotin anti-Armenian hamster IgG (cat.13-4113) + SAV-PE (cat. 12-4312) were used in a 3-step staining protocol. Total viable cells were used for analysis.

Available Formats of This Product

Cat. No.	Format	Excite (nm)	Emit (nm)	Reported Applications
12-1541	PE anti-mouse CD154 (CD40 Ligand, CD40L, gp39)	488	575	FC
13-1541	Biotin anti-mouse CD154 (CD40 Ligand, CD40L, gp39)	N/A	N/A	FC
14-1541	Affinity Purified anti-mouse CD154 (CD40 Ligand, CD40L, gp39)	N/A	N/A	FA FC IHC
16-1541	Functional Grade* Purified anti-mouse CD154 (CD40 Ligand, CD40L, gp39)	N/A	N/A	FA FC

*Functional Grade™ (FG™): Azide-free, sterile-filtered, and endotoxin < 0.001 ng/µg.
Purified: Contains azide, not sterile-filtered, and not endotoxin tested.

Description

The MR1 monoclonal antibody reacts with mouse CD154, a 39 kDa transmembrane glycoprotein also known as gp39 and CD40 ligand (CD40L). gp39 is expressed transiently by activated T cells and through its binding to CD40 on antigen presenting cells including B cells, monocytes/macrophages and dendritic cells, serves a crucial function in T-APC cognate interaction. gp39 interaction with CD40 transduces signals for T-dependent B cell activation and induces B cell cycle entry.

Usage

For research use only, not for diagnostic or therapeutic use. The MR1 antibody has been reported for use in flow cytometric analysis. It has also been reported to inhibit binding of CD154 to CD40 and activation of B cells.

Applications Tested

The MR1 antibody has been tested by flow cytometric analysis of resting and 6-8 hour activated splenocyte suspensions. This can be used at less than or equal to 0.5 µg per million cells in a 100 µl total staining volume. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Related Products

- Cat. 12-1541 PE anti-mouse CD154 (CD40 Ligand, CD40L, gp39) (clone MR1)
- Cat. 13-1541 Biotin anti-mouse CD154 (CD40 Ligand, CD40L, gp39) (clone MR1)
- Cat. 14-1541 Affinity Purified anti-mouse CD154 (CD40 Ligand, CD40L, gp39) (clone MR1)
- Cat. 11-4111 FITC Anti-Armenian Hamster IgG
- Cat. 13-4113 Biotin Anti-Armenian Hamster IgG (clone Polyclonal)
- Cat. 11-4317 Streptavidin-FITC (Fluorescein isothiocyanate)

Cat. 12-4317 Streptavidin-PE (Phycoerythrin)
Cat. 17-4317 Streptavidin Allophycocyanin (SA-APC)
Cat. 16-4444 Functional Grade Purified Armenian Hamster IgG Isotype Control (clone n/a)

References

Noelle, R. J., M. Roy, et al. (1992). "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 89(14): 6550-4.

Roy, M., T. Waldschmidt, et al. (1993). "The regulation of the expression of gp39, the CD40 ligand, on normal and cloned CD4+ T cells." J Immunol 151(5): 2497-510.

Van den Eertwegh, A. J., R. J. Noelle, et al. (1993). "In vivo CD40-gp39 interactions are essential for thymus-dependent humoral immunity. I. In vivo expression of CD40 ligand, cytokines, and antibody production delineates sites of cognate T-B cell interactions." J Exp Med 178(5): 1555-65.

Roy, M., A. Aruffo, et al. (1995). "Studies on the interdependence of gp39 and B7 expression and function during antigen-specific immune responses." Eur J Immunol 25(2): 596-603.