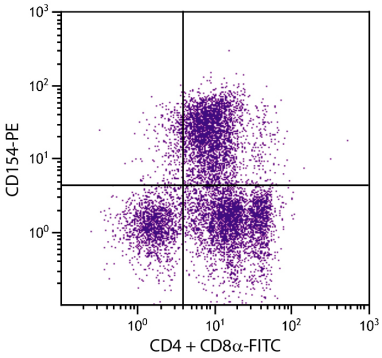
SouthernBiotech

Hamster Anti-Mouse CD154

Cat. No.	Format	Size
1650-01	Purified (UNLB)	0.5 mg
1650-02	Fluorescein (FITC)	0.5 mg
1650-08	Biotin (BIOT)	0.5 mg
1650-09	R-phycoerythrin (PE)	0.1 mg
1650-14	Low Endotoxin, Azide-Free (LE/AF)	0.5 mg



PMA and ionomycin stimulated BALB/c mouse splenocytes were stained with Hamster Anti-Mouse CD154-PE (SB Cat. No. 1650-09), Rat Anti-Mouse CD4-FITC (SB Cat. No. 1540-02), and Rat Anti-Mouse CD8α-FITC (SB Cat. No. 1550-02).

Overview

Clone MR1
Isotype Hamster (Armenian) IgG_3
Immunogen Activated mouse T_h1 clone D1.6
Specificity Mouse CD154; Mr 39 kDa
Alternate Name(s) CD40L, CD40 ligand, gp39

Description

CD154, formerly known as CD40 ligand and gp39, is a type II integral membrane protein and a member of the tumor necrosis factor (TNF) family of ligands. It is an important accessory molecule in T cell-B cell costimulatory interactions and is expressed predominantly on activated $CD4^+$ T lymphocytes. It is also present on the surface of activated Th0, Th1, and Th2 T cell clones. Its expression is transient and cyclosporin-sensitive. The MR1 monoclonal antibody binds to murine CD154 with high affinity, blocks binding to CD40, and blocks CD154 function. Administration of this antibody to mice blocks the ability to mount primary and secondary immune responses to TD antigens yet does not alter the immune response to TI antigens.

Applications

FC – Quality tested [1,3,7]
IHC-FS – Reported in literature [2,3]
IP – Reported in literature [1]
Block – Reported in literature [1,5,6]
ELISA – Reported in literature [4]

Working Dilutions

Flow Cytometry
FITC and BIOT conjugates ≤ 2 μg/10^6 cells
PE conjugate ≤ 0.2 μg/10^6 cells
For flow cytometry, the suggested use of these reagents is in a final volume of 100 μL

Other Applications
Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.

For Research Use Only. Not for Diagnostic or Therapeutic Use.

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Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added*. Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN_3 and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The low endotoxin, azide-free (LE/AF) antibody is supplied as 0.5 mg purified immunoglobulin in 1.0 mL of PBS. Contains no preservative; handle under aseptic conditions. Store at 2-8°C or aliquot into smaller volumes and store at -20°C. Avoid multiple freeze / thaw cycles.
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

References

1. Noelle RJ, Roy M, Shepard DM, Stamenkovic I, Ledbetter JA, Aruffo A. 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 USA. 1992;89:6550-4. (Immunogen, FC, IP, Block)
2. Gerritise K, Laman JD, Noelle RJ, Aruffo A, Ledbetter JA, Boersma WJ, et al. CD40-CD40 ligand interactions in experimental allergic encephalomyelitis and multiple sclerosis. Proc Natl Acad Sci USA. 1996;93:2499-2504. (IHC-FS)
3. Lettesjö H, Burd GP, Mageed RA. $CD4^+$ T lymphocytes with constitutive CD40 ligand in preautoimmune (NZB x NZW)F_1 lupus-prone mice: phenotype and possible role in autoreactivity. J Immunol. 2000;165:4095-104. (IHC-FS, FC, Block)
4. Ardjomand N, McAlister JC, Rogers NJ, Tan PH, George AJ, Larkin DF. Modulation of costimulation by CD28 and CD154 alters the kinetics and cellular characteristics of corneal allograft rejection. Invest Ophthalmol Vis Sci. 2003;44:3899-905. (ELISA)
5. Foy TM, Shepard DM, Durie FH, Aruffo A, Ledbetter JA, Noelle RJ. In vivo CD40-gp39 interactions are essential for thymus-dependent humoral immunity. II. Prolonged suppression of the humoral immune response by an antibody to the ligand for CD40, gp39. J Exp Med. 1993;178:1567-75. (Block)
6. Baker RL, Wagner DH, Haskins K. CD40 on NOD CD4 T cells contributes to their activation and pathogenicity. J Autoimmun. 2008;31:385-92. (Block)
7. Yokoyama M, Ukai T, Ayon Haro ER, Kishimoto T, Yoshinaga Y, Hara Y. Membrane-bound CD40 ligand on T cells from mice injected with lipopolysaccharide accelerates lipopolysaccharide-induced osteoclastogenesis. J Periodont Res. 2011;46:464-74. (FC)

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