Datasheet for ABIN1176849

anti-CD40 Ligand antibody

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Overview

Quantity:	0.5 mg
Target:	CD40 Ligand (CD40LG)
Reactivity:	Mouse
Host:	Armenian Hamster
Clonality:	Monoclonal
Conjugate:	This CD40 Ligand antibody is un-conjugated
Application:	Flow Cytometry (FACS), Immunohistochemistry (IHC), Blocking Reagent (BR)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Activated mouse Th1 clone D1.6
Clone:	MR1
Isotype:	IgG3 kappa
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Sterility:	0.2 µm filtered
Endotoxin Level:	Endotoxin level is ≤ 0.01 EU/µg (≤ 0.001 ng/µg) of protein as determined by the LAL assay.

Target Details

Target:	CD40 Ligand (CD40LG)

Target Details

Alternative Name:	CD154 (CD40LG Products)
Background:	The MR1 antibody reacts with CD154 (CD40 Ligand, gp39), an accessory molecule expressed on activated T helper (CD4+) lymphocytes. CD154 has also been detected on other types of leukocytes, including CD8+ T cells, medullary thymocytes, activated CD4+ NK-T cells, and human NK cells. CD154 plays an important role in costimulatory interactions between T and B lymphocytes and between antigen-presenting cells and lymphocytes, regulating the immune response at multiple levels. MR1 mAb inhibits in vitro activation of B lymphocytes by T helper cells by blocking interaction of gp39 with CD40. In vitro interactions of T cells and antigen-presenting cells can also be blocked by the MR1 antibody. In vivo treatment with MR1 antibody blocks the development of experimental autoimmune disease, inhibits formation of germinal centers and generation of memory B cells, reduces T-lymphocyte responses to allogeneic cells and allografts, prevents intrathymic deletion of self-reactive T lymphocytes, and disrupts antigen-specific T-cell responses. CD154 expression on activated and resting T lymphocytes. BALB/c spleen T cells, purified on a T Cell Enrichment Column (R&D Systems), were cultured for 8 hours in the presence (Panels A and C) or absence (Panels B and D) of plate-bound 500A2 antibody (anti-CD3e, Cat. No. 553238). They were stained with NA/LE™ MR1 antibody (Panels A and B), followed by biotinylated mouse anti-hamster IgG, Cat. No. 554010, then Streptavidin-PE, Cat. No. 554061, (Panels A, B, C, and D). Flow cytometry was performed on a BD FACScan™ Flow Cytometry System. Synonyms: CD40 Ligand, gp39
Pathways:	NF-kappaB Signaling, Production of Molecular Mediator of Immune Response, Cancer Immune Checkpoints

Application Details

Application Notes:	Flow cytometry: For the detection of mouse CD154 on activated peripheral T cells, it is strongly recommended that T cells be purified before activation. Mouse CD154 is transiently expressed on the surfaces of activated normal T cells and certain T cell clones with a maximal level detected 6-8 hours post-activation. Activation with immobilized anti-CD3e mAb (e.g., 145-2C11, Cat. No. 557306/553058, or 500A2, Cat. No. 553238) is sufficient to induce CD154 expression on CD4+ cells. It has been reported that CD8+ cells express CD154 only in response to PMA/Ionomycin treatment. Therefore, for detection of CD154, it is crucial to utilize the proper activation stimuli and to stain cells at the optimal time for CD154 expression. We recommend the use of biotinylated mouse anti-hamster IgG cocktail (Cat. No. 554010) followed by a bright second-step reagent, such as Streptavidin-PE (Cat. No. 554061), for optimal detection of CD154.

Application Details

Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2µm sterile filtered.
Preservative:	Azide free
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C. This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Publications

Product cited in:

Miga, Masters, Durell, Gonzalez, Jenkins, Maliszewski, Kikutani, Wade, Noelle: "Dendritic cell longevity and T cell persistence is controlled by CD154-CD40 interactions." in: **European journal of immunology**, Vol. 31, Issue 3, pp. 959-65, (2001) (PubMed).

Graca, Honey, Adams, Cobbold, Waldmann: "Cutting edge: anti-CD154 therapeutic antibodies induce infectious transplantation tolerance." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 165, Issue 9, pp. 4783-6, (2000) (PubMed).

Lettesjö, Burd, Mageed: "CD4+ T lymphocytes with constitutive CD40 ligand in preautoimmune (NZB x NZW)F1 lupus-prone mice: phenotype and possible role in autoreactivity." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 165, Issue 7, pp. 4095-104, (2000) (PubMed).

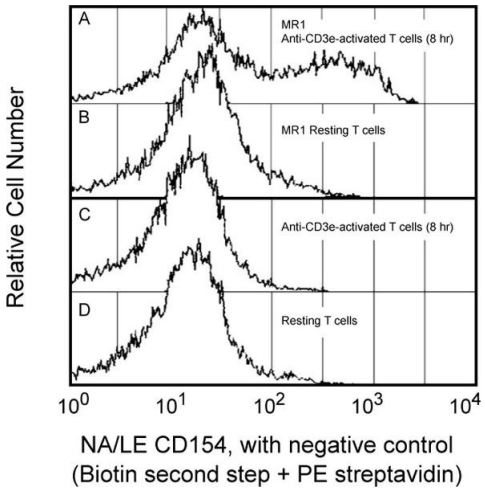
Tomura, Yu, Ahn, Yamashita, Yang, Ono, Hamaoka, Kawano, Taniguchi, Koezuka, Fujiwara: "A novel function of Valpha14+CD4+NKT cells: stimulation of IL-12 production by antigen-presenting cells in the innate immune system." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 163, Issue 1, pp. 93-101, (1999) (PubMed).

Garside, Ingulli, Merica, Johnson, Noelle, Jenkins: "Visualization of specific B and T lymphocyte interactions in the lymph node." in: **Science (New York, N.Y.)**, Vol. 281, Issue 5373, pp. 96-9, (1998) (PubMed).

Publications

There are more publications referencing this product on: Product page

Images



Flow Cytometry

Image 1.