EXBIO Antibodies

PRODUCT DATA SHEET

1F-629-C100

Monoclonal Antibody to CD154 / CD40L (mouse) Fluorescein (FITC) conjugated (0.1 mg)

Clone: MR-1

Isotype: Hamster IgG1

Specificity: The Armenian hamster monoclonal antibody MR-1 detects mouse CD154 / CD40L (CD40-ligand), a 39 kDa cell surface glycoprotein expressed predominantly on activated CD4+ lymphocytes.

Immunogen: Activated mouse Th1 clone D1.6

Species Reactivity: Mouse

Preparation: The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.

Concentration: 0.5 mg/ml

Storage Buffer: Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4

Storage / Stability: Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light.
Do not use after expiration date stamped on vial label.
Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.

Usage: The reagent is designed for Flow Cytometry analysis.
Suggested working concentration is 3 µg/ml. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.

Expiration: See vial label

Lot Number: See vial label

Background: CD154 / CD40L (CD40 ligand) is a member of the tumor necrosis factor family, and is expressed primarily on activated CD4+ lymphocytes, but also on mast cells, basophils, eosinophils and human dendritic cells. Its counter-receptor CD40 is expressed on antigen presenting cells, including dendritic cells, macrophages, and B cells, and also on fibroblasts. Triggering of CD40 by CD40L causes maturation of dendritic cells and upregulation of antigen presentation in functions of the MHC and costimulatory molecules. CD40L also functions as a direct stimulating factor for T cells. CD40L plays also roles e.g. in antibody class switching and modulation of apoptosis in the germinal center.

For laboratory research only, not for drug, diagnostic or other use.

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References:

*Noelle RJ, Roy M, Shepherd 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 U S A. 1992 Jul 15;89(14):6550-4.
*Howard LM, Miga AJ, Vanderlugt CL, Dal Canto MC, Laman JD, Noelle RJ, Miller SD: Mechanisms of immunotherapeutic intervention by anti-CD40L (CD154) antibody in an animal model of multiple sclerosis. J Clin Invest. 1999 Jan;103(2):281-90.
*Shin T, Kennedy G, Gorski K, Tsuchiya H, Koseki H, Azuma M, Yagita H, Chen L, Powell J, Pardoll D, Housseau F: Cooperative B7-1/2 (CD80/CD86) and B7-DC costimulation of CD4+ T cells independent of the PD-1 receptor. J Exp Med. 2003 Jul 7;198(1):31-8.
*Luzina IG, Atamas SP, Storrer CE, daSilva LC, Kelsoe G, Papadimitriou JC, Handwerger BS: Spontaneous formation of germinal centers in autoimmune mice. J Leukoc Biol. 2001 Oct;70(4):578-84.
*Wu Y, Zhou Q, Zheng P, Liu Y: CD28-independent induction of T helper cells and immunoglobulin class switches requires costimulation by the heat-stable antigen. J Exp Med. 1998 Apr 6;187(7):1151-6.
*Salgado CG, Nakamura K, Sugaya M, Tada Y, Asahina A, Koyama Y, Irie S, Tamaki K: Functional CD40 ligand is expressed on epidermal Langerhans cells. J Leukoc Biol. 1999 Aug;66(2):281-5.
*Murakawa T, Kerklo MM, Zamora MR, Wei Y, Gill RG, Henson PM, Grover FL, Nicolls MR: Simultaneous LFA-1 and CD40 ligand antagonism prevents airway remodeling in orthotopic airway transplantation: implications for the role of respiratory epithelium as a modulator of fibrosis. J Immunol. 2005 Apr 1;174(7):3869-79.
*Hwang Y, Nahm MH, Briles DE, Thomas D, Purkerson JM: Acquired, but not innate, immune responses to Streptococcus pneumoniae are compromised by neutralization of CD40L. Infect Immun. 2000 Feb;68(2):511-7.
*Fischbein MP, Ardehali A, Yun J, Schoenberger S, Laks H, Irie Y, Dempsey P, Cheng G, Fishbein MC, Bonavida B: CD40 signaling replaces CD4+ lymphocytes and its blocking prevents chronic rejection of heart transplants. J Immunol. 2000 Dec 15;165(12):7316-22.
*Lode HN, Xiang R, Pertl U, Förster E, Schoenberger SP, Gillies SD, Reisfeld RA: Melanoma immunotherapy by targeted IL-2 depends on CD4(+) T-cell help mediated by CD40/CD40L interaction. J Clin Invest. 2000 Jun;105(11):1623-30.
*And many other.

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