Technical Data Sheet

Purified NA/LE Rat Anti-Mouse CD11a

Product Information

Material Number: 553337

Alternate Name: Integrin αL Chain, LFA-1α

 Size:
 0.5 mg

 Concentration:
 1.0 mg/ml

 Clone:
 M17/4

Immunogen: C57BL/6 Mouse Splenic Secondary Cytotoxic T Lymphocytes

Isotype:Rat (WF) IgG2a, κ Reactivity:QC Testing: Mouse

Storage Buffer: No azide/low endotoxin: Aqueous buffered solution containing no preservative,

 $0.2\mu m$ sterile filtered. Endotoxin level is ≤ 0.01 EU/ μg (≤ 0.001 ng/ μg) of

protein as determined by the LAL assay.

Description

The M17/4 antibody reacts with the 180 kDa α L chain of LFA-1 (CD11a/CD18, α L β 2 integrin), a heterodimeric surface glycoprotein expressed on almost all leukocytes. CD8a+CD8b- intestinal intraepithelial T lymphocytes, which are believed to be thymus independent, do not express CD11a. LFA-1 mediates a variety of heterotypic and homotypic intercellular adhesions through interaction with ICAM-1 (CD54) and ICAM-2 (CD102), including participation in the immunological synapses between CD8+ T lymphocytes and antigen-presenting cells. mAb M17/4 blocks a variety of LFA-1-mediated cells interactions in vitro, and costimulatory effects have also been described. In vivo treatment with M17/4 mAb reduces the severity of graft-versus-host reactions, prolongs allograft survival, inhibits the development of autoimmunity, and blocks substance P-induced leukocyte migration. The M17/4 and 2D7 (Cat. No. 553120) antibodies are reported to recognize different epitopes of the CD11a molecule.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

присатон			
Flow cytometry	Routinely Tested		
Blocking	Reported		
Immunoprecipitation	Reported		
Western blot	Not Recommended		

Recommended Assay Procedure:

For IHC, we recommend the use of purified M17/4 mAb in our special formulation for immunohistochemistry, Cat. No. 550528.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal
553926	Purified NA/LE Rat IgG2a κ Isotype Control	0.5 mg	R35-95
550528	Purified Rat Anti-Mouse CD11a	1.0 ml	M17/4

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Connolly MK, Kitchens EA, Chan B, Jardieu P, Wofsy D. Treatment of murine lupus with monoclonal antibodies to lymphocyte function-associated antigen-1: dose-dependent inhibition of autoantibody production and blockade of the immune response to therapy. *Clin Immunol Immunopathol.* 1994; 72(2):198-203. (Clone-specific: Functional assay)

Driessens MH, van Hulten P, Zuurbier A, La Riviere G, Roos E. Inhibition and stimulation of LFA-1 and Mac-1 functions by antibodies against murine CD18. Evidence that the LFA-1 binding sites for ICAM-1, -2, and -3 are distinct. *J Leukoc Biol.* 1996; 60(6):758-765. (Clone-specific: Functional assay)
Haming R, Pelletier J, Lubbe K, Takei F, Merluzzi VJ. Reduction in the severity of graft-versus-host disease and increased survival in allogenic mice by treatment with monoclonal antibodies to cell adhesion antigens LFA-1 alpha and MALA-2. *Transplantation*

. 1991; 52(5):842-845. (Clone-specific: Functional assay)

Heagy W, Walterbangh C, Martz E. Potent ability of anti-LFA-1 monoclonal antibody to prolong allograft survival. *Transplantation*

. 1984; 37(5):520-523. (Clone-specific: Functional assay)

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Huleatt JW, Lefrancois L. Beta2 integrins and ICAM-1 are involved in establishment of the intestinal mucosal T cell compartment. *Immunity.* 1996; 5(3):263-273. (Biology)

Kootstra CJ, Van Der Giezen DM, Van Krieken JH, De Heer E, Bruijn JA. Effective treatment of experimental lupus nephritis by combined administration of anti-CD11a and anti-CD54 antibodies. Clin Exp Immunol. 1997; 108(2):324-332. (Clone-specific: Functional assay)

Kuhlman P, Moy VT, Lollo BA, Brian AA. The accessory function of murine intercellular adhesion molecule-1 in T lymphocyte activation. Contributions of adhesion and co-activation. *J Immunol.* 1991; 146(6):1773-1782. (Clone-specific: Functional assay, Immunoprecipitation)

Larson RS, Springer TA. Structure and function of leukocyte integrins. Immunol Rev. 1990; 114:181-217. (Biology)

Potter TA, Grebe K, Freiberg B, Kupfer A. Formation of supramolecular activation clusters on fresh ex vivo CD8+ T cells after engagement of the T cell antigen receptor and CD8 by antigen-presenting cells. *Proc Natl Acad Sci U S A*. 2001; 98(22):12624-12629. (Biology)

Saban MR, Saban R, Bjorling D, Haak-Frendscho M. Involvement of leukotrienes, TNF-alpha, and the LFA-1/ICAM-1 interaction in substance P-induced granulocyte infiltration. *J Leukoc Biol.* 1997; 61(4):445-451. (Clone-specific: Functional assay)

Sanchez-Madrid F, Davignon D, Martz E, Springer TA. Antigens involved in mouse cytolytic T-lymphocyte (CTL)-mediated killing: functional screening and topographic relationship. *Cell Immunol.* 1982; 73(1):1-11. (Immunogen: Functional assay, Immunoprecipitation)

Sanchez-Madrid F, Simon P, Thompson S, Springer TA. Mapping of antigenic and functional epitopes on the alpha- and beta-subunits of two related mouse glycoproteins involved in cell interactions, LFA-1 and Mac-1. *J Exp Med.* 1983; 158(2):586-602. (Clone-specific: Functional assay, Immunoprecipitation, Western blot)

Sanders VM, Vitetta ES. B cell-associated LFA-1 and T cell-associated ICAM-1 transiently cluster in the area of contact between interacting cells. *Cell Immunol.* 1991; 132(1):45-55. (Clone-specific: Functional assay)

Springer TA. Traffic signals for lymphocyte recirculation and leukocyte emigration: the multistep paradigm. Cell. 1994; 76(2):301-314. (Biology)

Springer TA, Davignon D, Ho MK, Kurzinger K, Martz E, Sanchez-Madrid F. LFA-1 and Lyt-2,3, molecules associated with T lymphocyte-mediated killing; and Mac-1, an LFA-1 homologue associated with complement receptor function. *Immunol Rev.* 1982; 68:171-195. (Clone-specific: Functional assay, Immunoprecipitation)

van Kooyk Y, de Vries-van der Zwan A, de Waal LP, Figdor CG. Efficiency of antibodies directed against adhesion molecules to prolong skin graft survival in mice. Transplant Proc. 1994; 26(2):401-403. (Clone-specific: Functional assay)

Zhao Y, Iwata M. Cross-linking of the TCR-CD3 complex with CD4, CD8 or LFA-1 induces an anti-apoptotic signal in thymocytes: the signal is canceled by FK506. *Int Immunol.* 1995; 7(9):1387-1396. (Clone-specific: Functional assay)

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