

Technical Data Sheet

FITC Rat Anti-Mouse CD11a

Product Information

Material Number:	553340
Alternate Name:	Integrin α L Chain, LFA-1 α
Size:	0.5 mg
Concentration:	0.5 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:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

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.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage

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

The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
553929	FITC Rat IgG2a, κ Isotype Control	0.25 mg	R35-95

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

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)

Diessens MH, van Hulten P, Zuurber 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)

Harning R, Pelletier J, Lubbe K, Takei F, Merluzzi VJ. Reduction in the severity of graft-versus-host disease and increased survival in allogeneic mice by treatment with monoclonal antibodies to cell adhesion antigens LFA-1 alpha and MALA-2. *Transplantation.* 1991; 52(5):842-845.(Clone-specific)

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Heagy W, Walterbanh C, Martz E. Potent ability of anti-LFA-1 monoclonal antibody to prolong allograft survival. *Transplantation*. 1984; 37(5):520-523. (Clone-specific)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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