



Antibodies

A7-216-T025

Monoclonal Antibody to CD18 Alexa Fluor® 700 conjugated (25 tests)

Clone:	MEM-48
Isotype:	Mouse IgG1
Specificity:	The antibody MEM-48 recognizes an epitope involving residues 534-546 in cysteine-rich repeat 3 of the CD18 antigen (integrin beta2 subunit; beta2 integrin). CD18 is a 90-95 kDa type I transmembrane protein expressed on all leukocytes.
Immunogen:	Leukocytes of a patient suffering from a LGL-type leukemia.
Species Reactivity:	Human
Negative Species:	Canine (Dog)
Preparation:	The purified antibody is conjugated with Alexa Fluor® 700 under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
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 of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.1 ml) is sufficient for 25 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD18, integrin beta2 subunit, forms heterodimers with four types of CD11 molecule to constitute leukocyte (beta2) integrins: alphaLbeta2 (CD11a/CD18, LFA-1), alphaMbeta2 (CD11b/CD18, Mac-1, CR3), alphaXbeta2 (CD11c/CD18) and alphaDbeta2 (CD11d/CD18). In most cases, the response mediated by the integrin is a composite of the functions of its individual subunits. These integrins are essential for proper leukocyte migration, mediating intercellular contacts. Absence of CD18 leads to leukocyte adhesion deficiency-1; severe reduction of CD18 expression leads to the development of a psoriasiform skin disease. CD18 is also a target of Mannheimia (Pasteurella) haemolytica leukotoxin and is sufficient to mediate leukotoxin-mediated cytolysis.

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

**Antibodies****References:**

- *Gao JX, Issekutz AC: Mac-1 (CD11b/CD18) is the predominant beta 2 (CD18) integrin mediating human neutrophil migration through synovial and dermal fibroblast barriers. *Immunology*. 1996 Jul;88(3):463-70.
- *Drbal K, Angelisova P, Cerny J, Pavlistova D, Cebecauer M, Novak P, Horejsi V: Human leukocytes contain a large pool of free forms of CD18. *Biochem Biophys Res Commun*. 2000 Aug 28;275(2):295-9.
- *Shang XZ, Issekutz AC: Contribution of CD11a/CD18, CD11b/CD18, ICAM-1 (CD54) and -2 (CD102) to human monocyte migration through endothelium and connective tissue fibroblast barriers. *Eur J Immunol*. 1998 Jun;28(6):1970-9.
- *Kess D, Peters T, Zamek J, Wickenhauser C, Tawadros S, Loser K, Varga G, Grabbe S, Nischt R, Sunderkötter C, Müller W, Krieg T, Scharffetter-Kochanek K: CD4+ T cell-associated pathophysiology critically depends on CD18 gene dose effects in a murine model of psoriasis. *J Immunol*. 2003 Dec 1;171(11):5697-706.
- *Solovjov DA, Pluskota E, Plow EF: Distinct roles for the alpha and beta subunits in the functions of integrin alphaMbeta2. *J Biol Chem*. 2005 Jan 14;280(2):1336-45.
- *Peters T, Sindrilaru A, Wang H, Oreshkova T, Renkl AC, Kess D, Scharffetter-Kochanek K: CD18 in monogenic and polygenic inflammatory processes of the skin. *J Invest Dermatol Symp Proc*. 2006 Sep;11(1):7-15.
- *Dassanayake RP, Maheswaran SK, Srikumaran S: Monomeric expression of bovine beta2-integrin subunits reveals their role in Mannheimia haemolytica leukotoxin-induced biological effects. *Infect Immun*. 2007 Oct;75(10):5004-10.
- *Bazil V, Stefanova I, Hilgert I, Kristofova H, Vanek S, Horejsi V.: Monoclonal antibodies against human leucocyte antigens. IV. Antibodies against subunits of the LFA-1 (CD11a/CD18) leucocyte-adhesion glycoprotein. *Folia Biol (Praha)*. 1990;36(1):41-50.
- *Larson RS, Springer TA: Structure and function of leukocyte integrins. *Immunol Rev*. 1990 Apr;114:181-217.
- *Stefanova I, Horejsi V: Association of the CD59 and CD55 cell surface glycoproteins with other membrane molecules. *J Immunol*. 1991 Sep 1;147(5):1587-92.
- *Garnotel R, Rittié L, Poitevin S, Monboisse JC, Nguyen P, Potron G, Maquart FX, Randoux A, Gillery P: Human blood monocytes interact with type I collagen through alpha x beta 2 integrin (CD11c-CD18, gp150-95). *J Immunol*. 2000 Jun 1;164(11):5928-34.
- *Otonello L, Epstein AL, Dapino P, Barbera P, Morone P, Dallegri F: Monoclonal Lym-1 antibody-dependent cytotoxicity by neutrophils exposed to granulocyte-macrophage colony-stimulating factor: intervention of Fc gammaRII (CD32), CD11b-CD18 integrins, and CD66b glycoproteins. *Blood*. 1999 May 15;93(10):3505-11.
- *Schiff DE, Rae J, Martin TR, Davis BH, Curnutte JT: Increased phagocyte Fc gammaRI expression and improved Fc gamma-receptor-mediated phagocytosis after in vivo recombinant human interferon-gamma treatment of normal human subjects. *Blood*. 1997 Oct 15;90(8):3187-94.
- *Kuttruff S, Koch S, Kelp A, Pawelec G, Rammensee HG, Steinle A: NKp80 defines and stimulates a reactive subset of CD8 T cells. *Blood*. 2009 Jan 8;113(2):358-69.

This product is provided under an agreement between Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corporation), and Exbio Praha, a.s., and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications, and corresponding non-U.S. equivalents, owned by Molecular Probes, Inc. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity), including use in flow cytometry that does not utilize a bead based array, but excluding use in combination with microarrays or High Content Screening. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For information on purchasing a license to this product for any other use, contact Molecular Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.

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

EXBIO Praha | Nad Safinou II 341 | 252 42 Vestec u Prahy | Czech Republic
Tel: +420 261 090 664 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz