

1P-216-T025

## Monoclonal Antibody to CD18 Phycoerythrin (PE) conjugated (25 tests)

<b>Clone:</b>	MEM-48
<b>Isotype:</b>	Mouse IgG1
<b>Specificity:</b>	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.
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Leukocytes of a patient suffering from a LGL-type leukemia.
<b>Species Reactivity:</b>	Human
<b>Negative Species:</b>	Canine (Dog)
<b>Preparation:</b>	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
<b>Storage Buffer:</b>	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
<b>Storage / Stability:</b>	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.
<b>Usage:</b>	The reagent is designed for Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10 <sup>6</sup> cells in a suspension. The content of a vial (0.5 ml) is sufficient for 25 tests.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	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.

Unless indicated otherwise, all products are For Research Use Only and not for diagnostic or therapeutic use. Not for resale or transfer either as a stand-alone product or as a component of another product without written consent of EXBIO. EXBIO will not be held responsible for patent infringement or other violations that may occur with the use of our products. All orders are accepted subject to EXBIO's term and conditions which are available at [www.exbio.cz](http://www.exbio.cz).

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

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic  
Tel: +420 261 090 666 | Fax: +420 261 090 660 | [orders@exbio.cz](mailto:orders@exbio.cz) | [www.exbio.cz](http://www.exbio.cz)