

Monoclonal Antibody to CD29 - PE

Alternate names:	FNRB, Fibronectin receptor subunit beta, ITGB1, Integrin VLA-4 subunit beta, MDF2, MSK12
Catalog No.:	SM3016R
Quantity:	100 Tests
Background:	CD29 (beta1 integrin subunit, GPIIa) forms non-covalently linked heterodimers with at least 6 different alpha chains (alpha1-alpha6, CD49a-f) determining the binding properties of beta1 (VLA) integrins. These integrins mediate cell adhesion to collagen, fibronectin, laminin and other extracellular matrix (ECM) components. This interaction hinders cell death, whereas disruption of anchorage to ECM leads to apoptosis. Decreased expression of most beta1 integrins correlates with acquiring multidrug resistance of tumour cells during selection in presence of antitumour drug. In platelets, translocation of intracellular pool of beta1 integrins to the plasma membrane following thrombin stimulation. These integrins are also up-regulated in leukocytes during emigration and extravascular migration and appear to be critically involved in regulating the immune cell trafficking from blood to tissue, as well as in regulating tissue damage and disease symptoms related to inflammatory bowel disease. Through a beta1 integrin-dependent mechanism, fibronectin and type I collagen enhance cytokine secretion of human airway smooth muscle in response to IL-1beta.
Uniprot ID:	P05556
NCBI:	9606
Host / Isotype:	Mouse / IgG1
Clone:	MEM-101A
Immunogen:	Raji Burkitt's lymphoma cell line
Format:	State: Liquid purified IgG fraction. Purification: Size-Exclusion Chromatography Buffer System: PBS containing 15 mM Sodium Azide as preservative and 0.2% (w/v) high-grade BSA (Protease free) as stabilizer Label: PE – R-Phycoerythrin
Applications:	Flow Cytometry: 20 µl reagent / 100 µl of whole blood or 10e6 cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
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- Specificity:** The antibody MEM-101A reacts with CD29 (integrin beta-1 chain), a 130 kDa single chain type I glycoprotein expressed as a heterodimer (non-covalently associated with the integrin alpha subunits 1-6). CD29 is broadly expressed on majority of hematopoietic and non-hematopoietic cells (leukocytes, platelets, fibroblasts, endothelial cells, epithelial cells and mast cells).
Species: Human, Porcine and Canine (Dog). Does not work with Mouse. Other species not tested.
- Storage:** Store the antibody in the dark at 2-8°C.
Do Not Freeze!
Avoid prolonged exposure to light.
Shelf life: one year from despatch.
- General References:**
1. Wencel-Drake JD, Dieter MG, Lam SC: Immunolocalization of beta 1 integrins in platelets and platelet-derived microvesicles. *Blood*. 1993 Aug 15;82(4):1197-203.
 2. Werr J, Johansson J, Eriksson EE, Hedqvist P, Ruoslahti E, Lindbom L: Integrin alpha(2)beta(1) (VLA-2) is a principal receptor used by neutrophils for locomotion in extravascular tissue. *Blood*. 2000 Mar 1;95(5):1804-9.
 3. Peng Q, Lai D, Nguyen TT, Chan V, Matsuda T, Hirst SJ: Multiple beta 1 integrins mediate enhancement of human airway smooth muscle cytokine secretion by fibronectin and type I collagen. *J Immunol*. 2005 Feb 15;174(4):2258-64.
 4. Lundberg S, Lindholm J, Lindbom L, Hellström PM, Werr J: Integrin alpha2beta1 regulates neutrophil recruitment and inflammatory activity in experimental colitis in mice. *Inflamm Bowel Dis*. 2006 Mar;12(3):172-7.
 5. Morozevich GE, Kozlova NI, Preobrazhenskaya ME, Ushakova NA, Eltsov IA, Shtil AA, Berman AE: The role of beta1 integrin subfamily in anchorage-dependent apoptosis of breast carcinoma cells differing in multidrug resistance. *Biochemistry (Mosc)*. 2006 May;71(5):489-95.
 6. Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
 7. Simova S, Klima M, Cermak L, Sourkova V, Andera L: Arf and Rho GAP adapter protein ARAP1 participates in the mobilization of TRAIL-R1/DR4 to the plasma membrane. *Apoptosis*. 2008 Mar;13(3):423-36.

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