



11-219-C025

Monoclonal Antibody to CD29 Purified Antibody (0.025 mg)

Clone:	MEM-101A
Isotype:	Mouse IgG1
Specificity:	The antibody MEM-101A reacts with CD29 (integrin beta1 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). HLDA VI; WS Code AS A048
Regulatory Status:	RUO
Immunogen:	Raji Burkitt's lymphoma cell line
Species Reactivity:	Human, Porcine, Canine (Dog)
Negative Species:	Mouse
Application:	Flow Cytometry Recommended dilution:2 µg/ml Immunoprecipitation Western Blotting Recommended dilution:2 µg/ml Positive control:JURKAT human leukemia T-cell lysate Kg-1a human leukemia cell lysate Sample preparation:buffer with laurylmaltoside, 2 x non-reducing SDS Application note:Non-reducing conditions. SDS-PAGE (6% separating gel, 4% stacking gel). Recommended secondary antibody - anti mouse IgG/HRP, dilution 1:2000, 60 min on vertical incubator.
Purity:	> 95% (by SDS-PAGE)
Purification:	Purified by protein-A affinity chromatography
Concentration:	1 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Expiration:	See vial label
Lot Number:	See vial label

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

**Antibodies****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.

References:

- *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.
- *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.
- *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.
- *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.
- *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.
- *Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
- *Plánka L, Necas A, Srnec R, Rauser P, Starý D, Jancár J, Amler E, Filová E, Hlucilová J, Kren L, Gál P: Use of allogenic stem cells for the prevention of bone bridge formation in miniature pigs. *Physiol Res*. 2009;58(6):885-93.
- *Machacek C, Supper V, Leksa V, Mitulovic G, Spittler A, Drbal K, Suchanek M, Ohradanova-Repic A, Stockinger H: Folate Receptor β Regulates Integrin CD11b/CD18 Adhesion of a Macrophage Subset to Collagen. *J Immunol*. 2016 Sep 15;197(6):2229-38.
- *Simova S, Klíma 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.

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.

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