Datasheet for ABIN192102

# anti-ITGB1 antibody (PE)

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## Overview

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| Quantity: | 100 tests |
| Target: | ITGB1 |
| Reactivity: | Human, Pig, Dog |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This ITGB1 antibody is conjugated to PE |
| Application: | Flow Cytometry (FACS) |

## Product Details

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| Immunogen: | Raji Burkitt's lymphoma cell line |
| Clone: | MEM-101A |
| Isotype: | IgG1 |
| Specificity: | The antibody MEM-101A reacts with an extracellular epitope of 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). |
| No Cross-Reactivity: | Mouse |
| Cross-Reactivity (Details): | Human, Porcine, Canine (Dog) |
| Purification: | Purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. Unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography. |

## Target Details

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| Target: | ITGB1 |
| Alternative Name: | CD29 (ITGB1 Products) |
| Background: | Integrin subunit beta 1,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.,Integrin β,1 chain, ITGB1, VLAB, MDF2, FNRB, GPIIA, MSK12 |
| Gene ID: | 3688 |
| UniProt: | P05556 |
| Pathways: | Cell-Cell Junction Organization, Regulation of G-Protein Coupled Receptor Protein Signaling, CXCR4-mediated Signaling Events, Signaling of Hepatocyte Growth Factor Receptor, Integrin Complex, SARS-CoV-2 Protein Interactome |

## Application Details

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| Application Notes: | Flow cytometry: The reagent is designed for analysis of human blood cells using 20 µL reagent / 100 µL of whole blood or $10^6$ cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests. |
| Comment: | 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. |
| Restrictions: | For Research Use only |

## Handling

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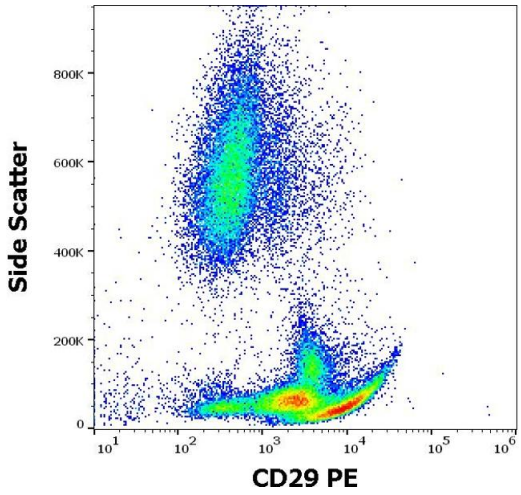
| Reconstitution: | No reconstitution is necessary. |
| Buffer: | Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Handling Advice: | **Do not freeze.**<br>Avoid prolonged exposure to light. |
| Storage: | 4 °C |
| Storage Comment: | Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze. |

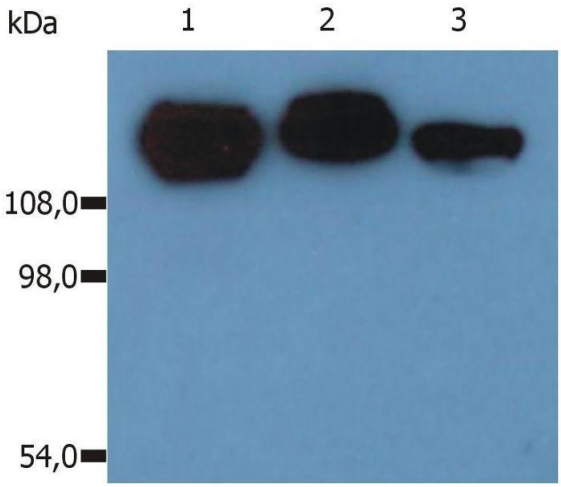
## Publications

| | |
|---|---|
| Product cited in: | Barale, Dentelli, Togliatto, Trombetta, Olgasi, Scozzari, Toppino, Morino, Brizzi: "High glucose via NOX-dependent ROS generation and AKT activity promotes adipose-derived stem cell de-differentiation." in: **Stem cells and development**, (2012) (PubMed).<br><br>Plánka, Necas, Srnec, Rauser, Starý, Jancár, Amler, Filová, Hlucilová, Kren, Gál: "Use of allogenic stem cells for the prevention of bone bridge formation in miniature pigs." in: **Physiological research / Academia Scientiarum Bohemoslovaca**, Vol. 58, Issue 6, pp. 885-93, (2010) ( PubMed).<br><br>Símová, Klíma, Cermak, Sourková, Andera: "Arf and Rho GAP adapter protein ARAP1 participates in the mobilization of TRAIL-R1/DR4 to the plasma membrane." in: **Apoptosis : an international journal on programmed cell death**, Vol. 13, Issue 3, pp. 423-36, (2008) (PubMed). |



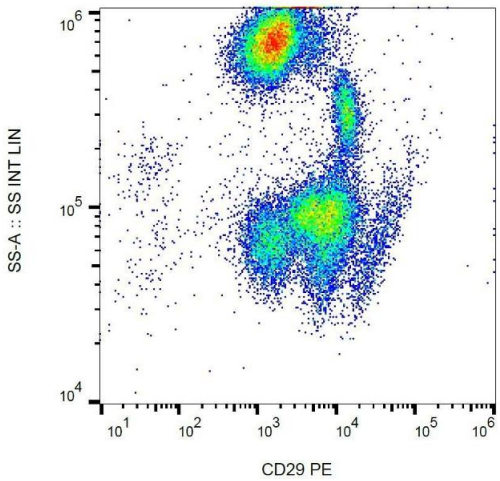

## Flow Cytometry

**Image 1.** Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD29 (MEM-101A) PE antibody (20 µL reagent / 100 µL of peripheral whole blood).




## Western Blotting

**Image 2.** Western Blotting analysis (non-reducing conditions) of isolated peripheral blood lymphocytes of various species using anti-CD29 (MEM-101A). Lane 1: lysate of human PBL Lane 2: lysate of canine PBL Lane 3: lysate of porcine PBL




## Flow Cytometry

**Image 3.** Surface staining of human peripheral blood with anti-human CD29 (MEM-101A) PE.

Please check the product details page for more images. Overall 4 images are available for ABIN192102.