

## ARG23444 anti-CD29 / Integrin beta 1 antibody [HM beta 1-1] (FITC)

Package: 100 µg  
Store at: 4°C

### Summary

Product Description	FITC-conjugated Hamster Monoclonal antibody [HM beta 1-1] recognizes CD29 / Integrin beta 1 Hamster anti Mouse CD29 antibody, clone HM beta 1-1 recognizes the murine integrin beta 1 subunit (CD29), a ~110 kDa cell surface glycoprotein that is widely expressed by a variety of cells including all leucocytes. CD29 forms non-covalent bonds with the integrin alpha subunits, including CD51 and CD49a-f, to form heterodimers. The ligands for these heterodimers include collagen, fibronectin, laminin and vascular adhesion molecule-1. In the immune system beta 1 integrins play an important role in cell adhesion, migration, activation and differentiation. Hamster anti Mouse CD29 antibody, clone HM beta 1-1 is reported to inhibit beta 1 integrin mediated adhesion (Noto et al. 1995).
Tested Reactivity	Ms, Rat
Tested Application	FACS
Host	Hamster
Clonality	Monoclonal
Clone	HM beta 1-1
Isotype	IgG
Target Name	CD29 / Integrin beta 1
Species	Mouse
Immunogen	Purified mouse VLA-4 antigen.
Conjugation	FITC
Alternate Names	CD29; Glycoprotein IIa; Fibronectin receptor subunit beta; VLAB; MSK12; CD antigen CD29; FNRB; GPIIA; VLA-4 subunit beta; VLA-BETA; MDF2; Integrin beta-1

### Application Instructions

Application table	<table><thead><tr><th>Application</th><th>Dilution</th></tr></thead><tbody><tr><td>FACS</td><td>1:50 - 1:100</td></tr></tbody></table>	Application	Dilution	FACS	1:50 - 1:100
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Application Note	FACS: Use 10 µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100 µl. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.				

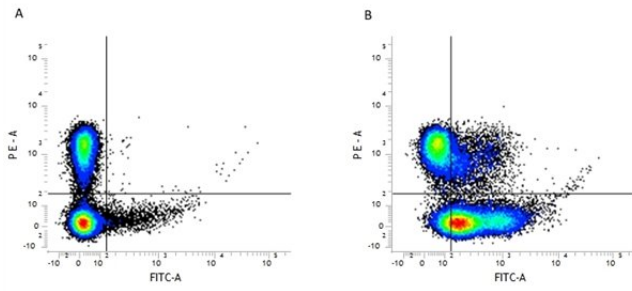
### Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS, 0.09% Sodium azide and 1% BSA.
Preservative	0.09% Sodium azide
Stabilizer	1% BSA

Concentration	0.1 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

Gene Symbol	ITGB1
Gene Full Name	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
Background	Integrins are heterodimeric proteins made up of alpha and beta subunits. At least 18 alpha and 8 beta subunits have been described in mammals. Integrin family members are membrane receptors involved in cell adhesion and recognition in a variety of processes including embryogenesis, hemostasis, tissue repair, immune response and metastatic diffusion of tumor cells. This gene encodes a beta subunit. Multiple alternatively spliced transcript variants which encode different protein isoforms have been found for this gene. [provided by RefSeq, Jul 2008]
Function	<p>Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for laminin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform 2 interferes with isoform 1 resulting in a dominant negative effect on cell adhesion and migration (in vitro). In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions. When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition. Involved in promoting endothelial cell motility and angiogenesis. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process and the formation of mineralized bone nodules. May be involved in up-regulation of the activity of kinases such as PKC via binding to KRT1. Together with KRT1 and GNB2L1/RACK1, serves as a platform for SRC activation or inactivation. Plays a mechanistic adhesive role during telophase, required for the successful completion of cytokinesis. Integrin alpha-3/beta-1 provides a docking site for FAP (seprase) at invadopodia plasma membranes in a collagen-dependent manner and hence may participate in the adhesion, formation of invadopodia and matrix degradation processes, promoting cell invasion.</p> <p>Isoform 5: Isoform 5 displaces isoform 1 in striated muscles. [UniProt]</p>
Calculated Mw	88 kDa
PTM	The cysteine residues are involved in intrachain disulfide bonds. [UniProt]



ARG23444 anti-CD29 / Integrin beta 1 antibody [HM beta 1-1] (FITC)  
FACS image

Flow Cytometry: Figure A. RPE conjugated Rat anti Mouse CD3 and FITC conjugated hamster IgG isotype control. Figure B. RPE conjugated Rat anti Mouse CD3 and ARG23444 anti-CD29 / Integrin beta 1 antibody [HM beta 1-1] (FITC). All experiments performed on red cell lysed Murine peripheral blood gated on lymphocytes.