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Product datasheet for CL030BX

Itga4 Rat Monoclonal Antibody [Clone ID: R1-2]

Product data:

Product Type:	Primary Antibodies
Clone Name:	R1-2
Applications:	FC, IHC
Recommended Dilution:	Flow cytometry. Immunoprecipitation. Immunohistochemistry. (1,2,3)
Reactivity:	Mouse
Host:	Rat
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Peyers Patch HEV binding lymphoma line (TK1) Donor: Fisher Spleen Fusion Partner: P3x63Ag8.653
Specificity:	This monoclonal antibody reacts with a4 integrin, which helps to mediate cell-cell and cell-matrix interactions.
Formulation:	PBS, 0.02% NaN3 and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml Label: Biotin State: Liquid
Concentration:	lot specific
Purification:	Protein G Chromatography
Conjugation:	Biotin
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	integrin alpha 4
Database Link:	Entrez Gene 16401 Mouse Q00651

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Background: Integrin alpha 4 (also called CD49d) is a 150 kDa protein that possesses a large extracellular domain involved in ligand binding, a single transmembrane domain, and an intracellular regulatory domain possessing multiple sites for phosphorylation. Integrin alpha 4 forms heterodimers with integrins beta 1 and beta 7. Integrin alpha 4 is expressed on leukocytes and leukocyte precursors, neural crest cells, and developing skeletal muscles and is essential for embryogenesis, hematopoiesis, and immune responses. The presence of integrin alpha 4 promotes cell migration and inhibits cell spreading and contractility. Integrin alpha 4 function has been implicated in the pathogenesis of multiple diseases including asthma, rheumatoid arthritis, Crohn's disease, ulcerative colitis, hepatitis C, and multiple sclerosis, and therefore, modulation of integrin alpha 4 function has become an important target for drug discovery.

Synonyms: Integrin alpha-4, Integrin alpha-IV, VLA-4, VLA4

Note:

Protocol: **FLOW CYTOMETRY ANALYSIS:**

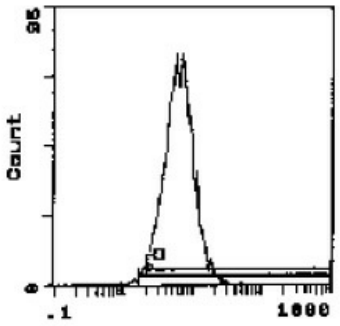
Method:
1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte®-M cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2x10e7 cells/ml in media A. Add 50 µl of this suspension to each tube (each tube will then contain 1 x 10e6 cells, representing 1 test).
4. To each tube, add ~1.0 µg* of this Ab per 10e6 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
7. Wash 2 times at 4°C.
8. Add 100 µl of secondary antibody (Streptavidin-FITC) at a 1:500 dilution.
9. Incubate tubes at 4°C for 30 - 60 minutes (It is recommended that tubes are protected from light since most fluorochromes are light sensitive).
10. Wash 2 times at 4°C.
11. Resuspend the cell pellet in 50 µl ice cold media B.
12. Transfer to suitable tubes for flow cytometric analysis containing 15 µl of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:
A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100 µl of 2M sodium azide in 100 mls).
B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 µl of 2M sodium azide in 100 mls).

Results - Tissue Distribution:
Mouse Strain: BALB/c
Cell Concentration: 1x10e6 cells per tests
Antibody Concentration Used: 1.0 µg/10e6 cells
Isotypic Control: Biotin Rat IgG2b

Cell Source: Percentage of cells stained above control:
TK1 Cells: 97.9%
Thymus: 80.0%
Spleen: 85.1%
Bone Marrow: 72.4%

Product images:



FL1 LOG
Cell Source: TK1 Cell Line
Percentage of cells stained above control: 97.9%