

## Product datasheet for **CL030FX**

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

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	R1-2
Applications:	FC
Recommended Dilution:	Flow cytometry (see protocol). Immunoprecipitation. Immunohistochemistry. (1,2,3)
Reactivity:	Mouse
Host:	Rat
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Peyers Patch HEV binding lymphoma line (TK1)
Specificity:	Antibody CL030FX reacts with $\alpha 4$ integrin (mouse CD49d), which helps to mediate cell-cell and cell-matrix interactions.
Formulation:	PBS, 0.02% NaN <sub>3</sub> and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml. Label: FITC State: Liquid
Concentration:	lot specific
Purification:	Purified from ascitic fluid via Protein G Chromatography
Conjugation:	FITC
Storage:	Store at 4°C. For long term storage, aliquot and freeze unused portion at -20°C in volumes appropriate for single usage. Avoid prolonged exposure to light.
Stability:	Shelf life: one year from despatch.
Gene Name:	integrin alpha 4
Database Link:	<a href="#">Entrez Gene 16401 Mouse Q00651</a>



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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  $2 \times 10^7$  cells/ml in media A. Add 50  $\mu$ l of this suspension to each tube (each tube will then contain  $1 \times 10^6$  cells, representing 1 test).
4. To each tube, add 1.0  $\mu$ g\* of CL030F per  $10^6$  cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.  
(It is recommended that the tubes are protected from light, since most fluorochemicals are light sensitive.)
7. Wash 2 times at 4°C.
8. Resuspend the cell pellet in 50  $\mu$ l ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15  $\mu$ l 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  $\mu$ l of 2M sodium azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100  $\mu$ l of 2M sodium azide in 100 mls).

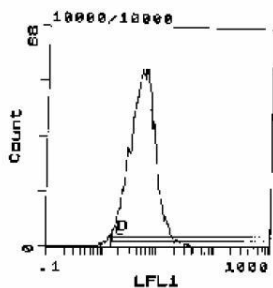
Results:

Tissue Distribution by Flow Cytometry Analysis:  
Mouse Strain: BALB/c  
Cell Concentration:  $1 \times 10^6$  cells per tests  
Antibody Concentration Used: 1.0  $\mu$ g/ $10^6$  cells  
Isotypic Control: FITC Rat IgG2b

Cell Source Percentage of cells stained above control:  
TK1 cell line 96.8%  
Thymus 45.6%  
Spleen 88.0%  
Bone Marrow 84.7%

Strain Distribution by Flow Cytometry Analysis:  
Cell Concentration:  $1 \times 10^6$  cells per tests  
Antibody Concentration Used: 1.0  $\mu$ g / $10^6$  cells  
Strains Tested: BALB/c, C57BL/6, C3H/He, CBA/J, AKR  
Positive: BALB/c, C57BL/6, C3H/He, CBA/J, AKR  
Negative: non

Product images:



Cell Source: TK1 cell line  
 Percentage of cells stained above control: 96.8%