

Product datasheet for **SM037F**

Integrin alpha 4 (ITGA4) Rat Monoclonal Antibody [Clone ID: PS/2]

Product data:

Product Type:	Primary Antibodies
Clone Name:	PS/2
Applications:	FC
Recommended Dilution:	Flow Cytometry: Use 10 µl of 1/5-1/10 diluted antibody to label 10e6 cells in 100 µl. The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors.
Reactivity:	Human, Mouse
Host:	Rat
Isotype:	IgG2b
Clonality:	Monoclonal
Specificity:	This antibody recognises murine alpha 4 integrin (CD49d). Clone PS/2 has also been reported to block the binding of CD49d to its ligands. We recommend the use of SM037LE for this purpose.
Formulation:	PBS, pH 7.4 containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer. Label: FITC State: Liquid purified IgG fraction. Label: Fluorescein Isothiocyanate Isomer 1
Concentration:	lot specific
Purification:	Affinity chromatography on Protein G.
Conjugation:	FITC
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. This product is photosensitive and should be protected from light.
Stability:	Shelf life: one year from despatch.
Gene Name:	integrin subunit alpha 4
Database Link:	Entrez Gene 3676 Human P13612



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Background:

Integrin α 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 α 4 forms heterodimers with integrins β 1 and β 7. Integrin α 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 α 4 promotes cell migration and inhibits cell spreading and contractility. Integrin α 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 α 4 function has become an important target for drug discovery. Phosphorylation of the serine 988 residue on the integrin α 4 cytoplasmic tail inhibits its interaction with the focal adhesion complex-associated protein paxillin, and modulates its effects on cell motility and spreading.

Synonyms:

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