



Peninsula Laboratories, LLC

A Member of the Bachem Group

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Biotinylated Monoclonal Antibody to Human CD49b Integrin $\alpha 2$ Chain, VLA-2 α Chain, Platelet gp1a

Monoclonal antibody A.1.43 detects CD49b and is a useful tumour progression marker, particularly also in combination with clone A10-33/1 (anti gpIIb/IIIa). CD49b, integrin $\alpha 2$, is a transmembrane glycoprotein that is non-covalently associated with the integrin $\beta 1$ chain to form the $\alpha 2\beta 1$ (very late antigen (VLA) 2) complex. The $\alpha 2\beta 1$ complex was originally reported on long-term activated T cells and was later shown to be identical to the gpIa/IIa complex on platelets. The $\alpha 2\beta 1$ complex is a pivotal receptor for collagen, and the adhesion of platelets to collagen is known to be important for the initial step of platelet aggregation. The antibody stains an epitope on the cell surface.

Product Number:	T-1122
Clone:	A.1.43
Host species, isotype:	Mouse IgG1
Quantity:	100 μ g
Format:	Affinity purified, biotinylated, lyophilized Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.2mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.01% thimerosal as a preservative.
Stability:	Original vial: 1 year at 4° - 8°C Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.
Applications:	Tested for immunohistochemistry (IHC); has been reported to work in FACS. Approximate working dilution for IHC: Frozen sections: 0.5 μ g/ml (1:400) Paraffin sections: not tested Optimal dilutions should be determined by the end user. Suggested positive control: Human skin. Antigen, epitope: The antigen is CD49b, the epitope has not been further characterized.



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Antigen distribution:

Isolated cells: The antibody is positive on the following melanoma cell lines: BRO, SK-Mel-13, SK-Mel-19, SK-Mel-29, SK-Mel-113, and negative on normal monocytes.

Tissue sections: Acetone fixed tissue sections of melanoma larger than 1.5mm show positive staining whereas the majority of benign melanocytic nevi (>95%) are negative.

Specificity:

Human: CD49b.

Other: not tested.

Selected references

Klein, C.E., et al.: Identification of a melanoma progression antigen as integrin VLA-2. *J. Invest. Dermatol.* 96: 281-84 (1991)

Broecker, E.B. et al.: Phenotypic dynamics of tumor progression in human malignant melanoma. *Int. J. Cancer* 36: 29-35 (1985)

Holzmann, B. et al.: Tumor progression in human malignant melanoma: five stages defined by their antigenic phenotypes. *Int. J. Cancer* 36: 466-71 (1987)

Yamamura, K. & Mishima, Y.: Antigen dynamics in melanocytic proteoglycan expression oncogenesis: anti-ganglioside and anti-ras p21 antibodies as markers of tumor progression. *J. Invest. Dermatol.* 94: 174-82 (1986)

Danen E.H.J. et al.: Emergence of alpha-5 beta-1 fibronectin- and alpha-v beta-3 vitronectin receptor expression in melanocytic tumor progression. *Histopathology* 24: 249-56 (1994).

For in vitro research only. Caution: this product contains thimerosal, a poisonous and hazardous substance.