



Peninsula Laboratories, LLC

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Monoclonal Antibody to Human CD106 Marker For Vascular Cell Adhesion Molecule VCAM-1

Monoclonal antibody 1299.27-1 recognizes VCAM-1 (vascular cell adhesion molecule 1) expressed by endothelial cells in tissue sections and in umbilical vein endothelial cells (HUVECs) stimulated by TNF- α or Interleukin (IL)-1. VCAM-1 is known to be a receptor for the integrin $\alpha 4\beta 1$, and to interact weakly with the closely related integrin $\alpha 4\beta 7$. The primary leucocytes that interact with CD106 are lymphocytes, monocytes, basophils and eosinophils. Neutrophils lack the $\alpha 4$ integrin, which explains some of the selective adhesion and recruitment characteristics of the different leucocytes. VCAM-1 is expressed in a wide range of inflammatory conditions, including rejecting cardiac transplant tissue, atherosclerotic lesions, multiple sclerosis, arthritic synovium and inflammatory reactions in the skin.

Product Number:	T-1126
Clone:	1299.27-1
Host species, isotype:	Mouse IgG2a
Quantity:	200 μ g
Format:	Affinity purified, lyophilized Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/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 $^{\circ}$ - 8 $^{\circ}$ C Stock solution or aliquots thereof: 1 year at -20 $^{\circ}$ C. Avoid repeated thawing and freezing.
Applications:	Tested for immunohistochemistry (IHC); has been described to work in ELISA and FACS. Approximate working dilution for IHC: Frozen sections: 0.5 μ g/ml 1:800 Paraffin sections: not tested Optimal dilutions should be determined by the end user. Suggested positive control: Human tonsil.



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Immunogen:	n.a.
Antigen, epitope:	The antigen is CD106. VCAM-1 is a protein of 110kD molecular weight which belongs to the immunoglobulin superfamily of proteins. Its corresponding ligand on mononuclear cells is the VLA-4 molecule. VCAM-1 binds to a different epitope of VLA-4 than fibronectin.
Antigen distribution:	Tissue sections: The antibody reacts with IL-1 stimulated human umbilical vein endothelial cells. Maximum expression can be observed after 6 hours as detected by ELISA on these cells.
Specificity:	Human: CD106, VCAM-1 Other species: not tested.

Selected references

Schnyder, B., S. Lugli, N. Feng, H. Etter, R.A. Lutz, B. Ryffel, K. Sugamura, H. Wunderli-Allensbach, R. Moser. Interleukin-4 (IL-4) and IL-13 bind to a shared heterodimeric complex on endothelial cells mediating vascular cell adhesion molecule-1 induction in the absence of the common γ chain. *Blood*: **87**: 4286-4295 (1996)

Springer, T. et al. *Nature* **346**: 425 (1990)

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