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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- $\alpha$  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.

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<b>Product Number:</b>	T-1126 (Lot 01PO9503)
<b>Clone:</b>	1299.27-1
<b>Host species, isotype:</b>	Mouse IgG2a
<b>Quantity:</b>	200 $\mu$ g
<b>Format:</b>	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.
<b>Stability:</b>	Original vial: 1 year at 4° - 8°C  Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.
<b>Applications:</b>	Tested for immunohistochemistry (IHC); has been described to work in ELISA and FACS.  <b>Approximate working dilution for IHC:</b> Frozen sections: 0.5 $\mu$ g/ml 1:800 Paraffin sections: not tested  Optimal dilutions should be determined by the end user.  Suggested positive control: Human tonsil.  Please see <a href="http://www.bma.ch">www.bma.ch</a> for protocols and general information.

<b>Immunogen:</b>	<b>n.a.</b>
<b>Antigen, epitope:</b>	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.
<b>Antigen distribution:</b>	<b>Tissue sections:</b> 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.
<b>Specificity:</b>	<b>Human:</b> CD106, VCAM-1 <b>Other species:</b> not tested.

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### **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  $\gamma$  chain. *Blood*: 87: 4286-4295 (1996)

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

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