Anti-VCAM-1: Polyclonal Vascular Cell Adhesion Molecule-1 Antibody

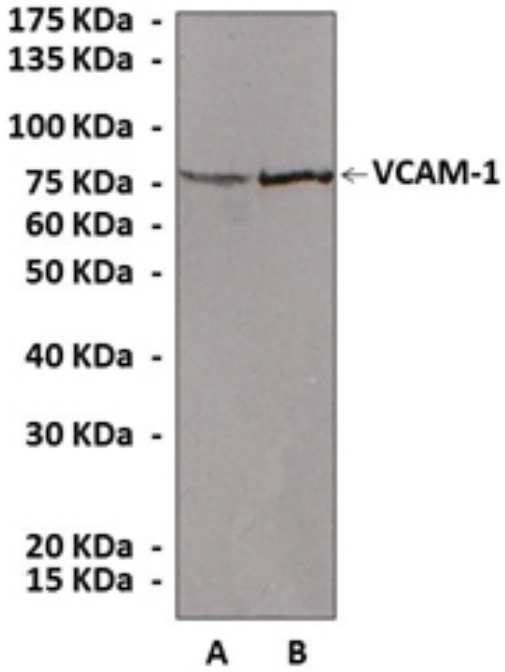
Product Sheet CA0406

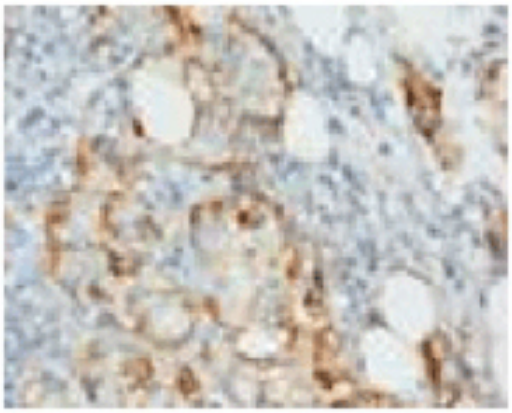
Description

BACKGROUND VCAM-1 (vascular cell adhesion molecule-1), or CD106, is an immunoglobulin-like adhesion molecule. It contains six or seven immunoglobulin domains and is expressed on both large and small vessels only after the endothelial cells are stimulated by cytokines.[1] Moreover, VCAM-1 expression is induced on endothelial cells during inflammatory bowel disease, atherosclerosis, allograft rejection, infection, and asthmatic responses. Primarily, VCAM-1 is an endothelial ligand for VLA-4 (Very Late Antigen-1 or alpha4beta1) of the beta1 subfamily of integrins and for integrin alpha4beta7. VLA-4 is expressed on most leukocytes and plays an important role in leukocyte trafficking by interacting with VCAM-1 on endothelial cells to mediate tethering, rolling, firm adhesion and transendothelial migration. During these responses, VCAM-1 forms a scaffold for leukocyte migration. VCAM-1 also activates signals within endothelial cells resulting in the opening of an “endothelial cell gate” through which leukocytes migrate. Immediately following this migration, the endothelial cell–endothelial cell contact is re-established. VCAM-1 outside-in signals are mediated by NADPH oxidase production of reactive oxygen species and subsequently activation of matrix metalloproteinases. These signals are required for endothelial cell shape changes and leukocyte migration.[2] In addition, VCAM-1/VLA-4 interaction has also been implicated in the compartmentalisation of B cells into peripheral lymphoid tissue, the association of neutrophils with bone marrow (BM) stromal cells, the promotion of interactions between follicular dendritic cells (FDC) and B cells, and in the formation of a docking structure that surrounds the B cell receptor (BCR) and TCR in the immunological synapse (IS) that forms between antigen presenting cells and antigen-specific B and T cells.[2] Interestingly, certain melanoma cells can use VCAM-1 to adhere to the endothelium, and VCAM-1 may participate in monocyte recruitment to atherosclerotic sites. As a result, VCAM-1 is a potential target drug target.[3]

REFERENCES

1. Chen, T.C.: et al.: J Neuroimmunol.:73 (1-2): 155-61, 1997.
2. Carter, R.A., I.P., Wicks: Arthritis Rheum.: 44(5): 985-94, 2001.





[1]

(Click to Enlarge) **Top:** Detection of VCAM-1 proteins from HUVEC cell (A)(201p-25n) and human lymphatic endothelial cell (B)(100LK-25a) lysates in Western blot assay, using Anti-VCAM-1. **Bottom:** Immunohistochemical staining of paraffin-embedded human breast cancer tissue, using Anti-VCAM-1.

Details

Cat.No.:	CA0406
Antigen:	N- terminal sequence of human VCAM-1
Isotype:	Affinity-Purified Rabbit Polyclonal IgG

Species & predicted species cross-reactivity ( ):	Human, Rabbit, Rat, Mouse
Applications & Suggested starting dilutions:*	WB 1:500 - 1:1000 IP n/d IHC (Paraffin) 1:50 - 1:200 ICC n/d FACS n/d
Predicted Molecular Weight of protein:	82 kDa
Specificity/Sensitivity:	Anti-CD106 reacts specifically with CD106 of human, rabbit, mouse & rat origin in Immunohistochemistry (membrane/cytoplasmic staining) and western blotting (110 kDa band), non-cross-reactive with other adhesion molecules.
Storage:	Store at 4° C for frequent use; at -20° C for at least one year.

*Optimal working dilutions must be determined by end user.

Resources/Documents

Product Sheet CA0406 [2]

Misc. Links

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- Distributors

Contact Us

Cell Applications, Inc
6455 Weathers Place
San Diego, CA 92121
Open M-F, 8am-5pm PST

800-645-0848
info@cellapplications.com

Source URL:https://www.cellapplications.com/anti-vcam-1-polyclonal-vascular-cell-adhesion-molecule-1-antibody

Links
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