

**DESCRIPTION**

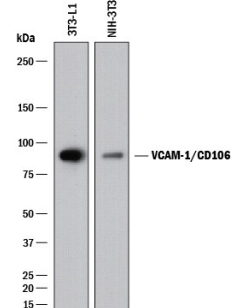
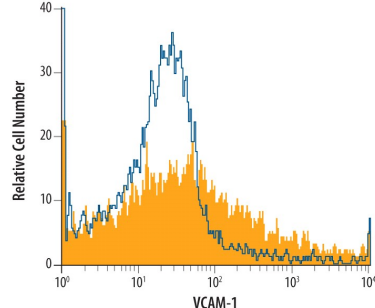
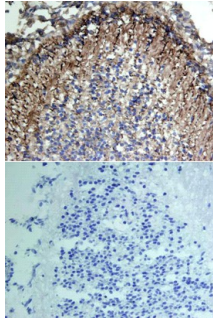
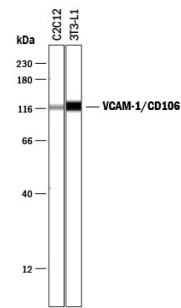

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse VCAM-1/CD106 in direct ELISAs and Western blots. In direct ELISA and Western blots, approximately 5% cross-reactivity with recombinant human VCAM-1 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse VCAM-1/CD106 Phe25-Glu698 Accession # P29533
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.25 µg/mL	See Below
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Simple Western</b>	1 µg/mL	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
<b>Adhesion Blockade</b>	The adhesion of U937 human histiocytic lymphoma cells (5 x 10 <sup>4</sup> cells/well) to immobilized Recombinant Mouse VCAM-1/CD106 Fc Chimera (Catalog # 643-VM, 10 µg/mL, 100 µL/well) was maximally inhibited (80-100%) by 50 µg/mL of the antibody.	

**DATA**

<p><b>Western Blot</b></p>  <p><b>Detection of Mouse VCAM-1/CD106 by Western Blot.</b> Western blot shows lysates of 3T3-L1 mouse embryonic fibroblast adipose-like cell line and NIH-3T3 mouse embryonic fibroblast cell line. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Mouse VCAM-1/CD106 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF643) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for VCAM-1/CD106 at approximately 95 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Flow Cytometry</b></p>  <p><b>Detection of VCAM-1/CD106 in Mouse Bone Marrow Cells by Flow Cytometry.</b> Mouse bone marrow cells were stained with Goat Anti-Mouse VCAM-1/CD106 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF643, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).</p>
<p><b>Immunohistochemistry</b></p>  <p><b>VCAM-1/CD106 in Mouse Embryo.</b> VCAM-1/CD106 was detected in immersion fixed frozen sections of mouse embryo using Goat Anti-Mouse VCAM-1/CD106 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF643) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for <a href="#">Chromogenic IHC Staining of Frozen Tissue Sections</a>.</p>	<p><b>Simple Western</b></p>  <p><b>Detection of Mouse VCAM-1/CD106 by Simple Western™.</b> Simple Western lane view shows lysates of C2C12 mouse myoblast cell line and 3T3-L1 mouse embryonic fibroblast adipose-like cell line, loaded at 0.2 mg/mL. A specific band was detected for VCAM-1/CD106 at approximately 116 kDa (as indicated) using 1 µg/mL of Goat Anti-Mouse VCAM-1/CD106 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF643) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p> 

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

## BACKGROUND

VCAM-1 (CD106), a member of the immunoglobulin superfamily, is a cell surface protein expressed by activated endothelial cells and certain leukocytes (such as macrophages). VCAM-1 expression is induced by IL-1 $\beta$ , IL-4, TNF- $\alpha$  and IFN- $\gamma$ . VCAM-1 binds to leukocyte integrins VLA-4 and  $\alpha_4\beta_7$ . The human and mouse VCAM-1 proteins share approximately 76% amino acid similarity.

During the inflammatory adhesion mechanism, activated integrins halt rolling leukocytes and attach them firmly to the vascular endothelium. They do this by binding to their ligands, for example VCAM-1, on endothelium. The VCAM-1: VLA-4/ $\alpha_4\beta_7$  interaction is also thought to be involved in the extravasation of white blood cells through the blood vessel wall to sites of inflammation.

ELISA techniques have shown that detectable levels of soluble VCAM-1 are present in the biological fluids of apparently normal individuals. Furthermore, a number of studies have reported that levels of VCAM-1 may be elevated or lowered in subjects with a variety of pathological conditions.