Human VCAM-1/CD106 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF809

DESCRIPTION

Species Reactivity	Human
Specificity	Detects VCAM-1 in direct ELISAs and Western blots. In direct ELISAs, less than 10% cross-reactivity with recombinant mouse VCAM-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line (CHO)-derived recombinant human VCAM-1 Extracellular domain
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	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.

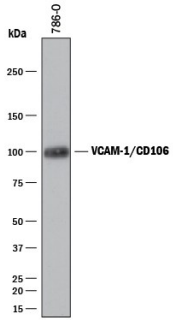
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Simple Western	20 µg/mL	HUVEC human umbilical vein endothelial cells
Adhesion Blockade	The adhesion of U937 human histiocytic lymphoma cells (5 x 10^4 cells/well) to immobilized Recombinant Human VCAM-1/CD106 (Catalog # ADP5, 2.5 µg/mL, 100 µL/well) was maximally inhibited (80-100%) by 25 µg/mL of the antibody.	

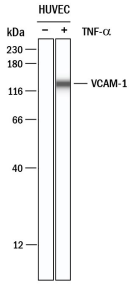
DATA

Western Blot



Detection of Human VCAM-1/CD106 by Western Blot. Western blot shows lysates of 786-O human renal cell adenocarcinoma cell line. PVDF membrane was probed with 2 µg/mL of Sheep Anti-Human VCAM-1/CD106 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF809) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # Catalog # HAF016). A specific band was detected for VCAM-1/CD106 at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human VCAM-1/CD106 by Simple Western™. Simple Western lane view shows lysates of HUVEC human umbilical vein endothelial cells untreated (-) or treated (+) with 10 ng/ml Recombinant Human TNF-α (Catalog # 210-TA) for 24 hrs, loaded at 0.2 mg/mL. A specific band was detected for VCAM-1/CD106 at approximately 132 kDa (as indicated) using 20 µg/mL of Sheep Anti-Human VCAM-1/CD106 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF809) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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-1β, IL-4, TNF-α, and IFN-γ. 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.

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