

# Recombinant Mouse VCAM1 Protein (His Tag)

Catalog Number:PKSM040831



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

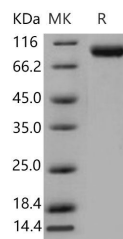
## Description

<b>Synonyms</b>	CD106;Vascular cell adhesion protein 1;Vcam1;L1CAM;VCMA1;Vcam-1
<b>Species</b>	Mouse
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Glu 698
<b>Accession</b>	NP_035823.3
<b>Calculated Molecular Weight</b>	75.8 kDa
<b>Observed molecular weight</b>	90-100 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured by the ability of the immobilized protein to support adhesion of U937 human histiocytic lymphoma cells. When $5 \times 10^4$ cells/well are added to mouse VCAM1 coated plates (10 $\mu\text{g/ml}$ with 100 $\mu\text{l/well}$ ), approximately 70%-80% cells will adhere after 1 hour at RT.

## Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu\text{g}$ of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at $-20$ to $-80^\circ\text{C}$ . Reconstituted protein solution can be stored at $4-8^\circ\text{C}$ for 2-7 days. Aliquots of reconstituted samples are stable at $< -20^\circ\text{C}$ for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 97 % as determined by reducing SDS-PAGE.

## Background

Vascular cell adhesion molecule 1 (VCAM-1), also known as CD106, is a cell surface sialoglycoprotein belonging to the immunoglobulin superfamily. Two forms of VCAM-1 with either six or seven extracellular Ig-like domains are generated by alternative splicing, with the longer form predominant. VCAM-1 is an endothelial ligand for very late antigen-4 (VLA-4) and  $\alpha 4\beta 7$  integrin expressed on leukocytes, and thus mediates leukocyte-endothelial cell adhesion and signal

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transduction. VCAM-1 expression is induced on endothelial cells during inflammatory bowel disease, atherosclerosis, allograft rejection, infection, and asthmatic responses. 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. VCAM-1 has been identified as a potential anti-inflammatory therapeutic target, the hypothesis being that reduced expression of VCAM-1 will slow the development of atherosclerosis. In addition, VCAM-1-activated signals in endothelial cells are regulated by cytokines indicating that it is important to consider both endothelial cell adhesion molecule expression and function during inflammatory processes.

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