

# Human VCAM-1 / CD106 Protein (ECD, Fc Tag)

Catalog Number: 10113-H02H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD106; INCAM-100; VCAM-1

### Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Pro 697) of human VCAM1 (NP\_001069.1) was expressed with the Fc region of human IgG1 at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** ≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

### Bio Activity:

**Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. When cells are added to VCAM1 coated plates (10 µg/mL, 100 µL/well) approximately > 70% cells will adhere after 1 hour of incubation at 37°C.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

**Predicted N terminal:** Phe 25

### Molecular Mass:

The recombinant human VCAM1/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 911 amino acids and has a predicted molecular mass of 100.8 kDa. As a result of glycosylation, the rh VCAM1/Fc monomer migrates as an approximately 116.3 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

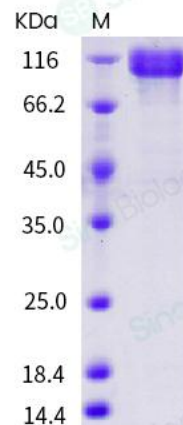
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Vascular cell adhesion molecule 1 (VCAM-1), also known as CD16, 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  $\alpha_4\beta_1$  integrin expressed on leukocytes, and thus mediates leukocyte-endothelial cell adhesion and signal 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.

## References

Cook-Mills JM. (2002) VCAM-1 signals during lymphocyte migration: role of reactive oxygen species. *Mol Immunol.* 39(9): 499-508.  
Preiss DJ, et al. (2007) Vascular cell adhesion molecule-1: a viable therapeutic target for atherosclerosis? *Int J Clin Pract.* 61(4): 697-701.