

# Recombinant Human VCAM-1/CD106 Protein

Catalog No.: RP00972 **Recombinant** **1 Publications**

## Sequence Information

| Species | Gene ID | Swiss Prot |
|---------|---------|------------|
| Human   | 7412    | P19320     |

### Tags

C-His

### Synonyms

CD106;INCAM-100;VCAM1

## Product Information

| Source       | Purification       |
|--------------|--------------------|
| HEK293 cells | > 95% by SDS-PAGE. |

| Calculated MW | Observed MW |
|---------------|-------------|
| 74.23 kDa     | 100-110 kDa |

### Endotoxin

Please contact us for more information.

### Formulation

Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

This protein 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 α4β7 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.

## Basic Information

### Description

Recombinant Human VCAM-1/CD106 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Phe25-Glu698) of human VCAM1 (Accession #NP\_001069.1) fused with a 6×His tag at the C-terminus.

### Bio-Activity

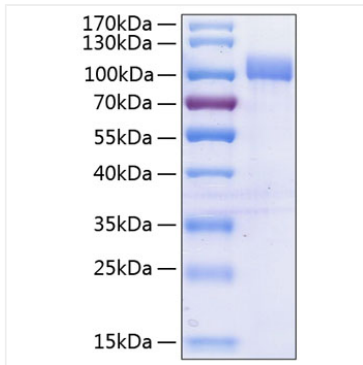
Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. When 5 × 10<sup>4</sup> cells/well are added to human VCAM1 coated plates (10 µg/mL with 100 µL/well), approximately 80%-90% cells will adhere after 1 hour at 37°C. | 2. Measured by its binding ability in a functional ELISA. Immobilized APC anti-human CD106 Antibody at 1 µg/mL (25 µL/well) can bind Human VCAM1 with a linear range of 0.46-16.9 ng/mL.

### Storage

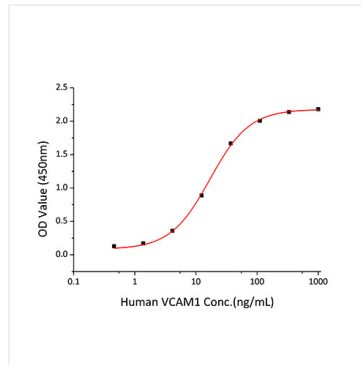
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human VCAM-1/CD106 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 100-110 kDa.



Immobilized APC anti-human CD106 Antibody at 1 $\mu$ g/mL (25  $\mu$ L/well) can bind Human VCAM1 with a linear range of 0.46-16.9ng/mL.