



**Synonym**

VCAM1,CD106,INCAM-100,V-CAM 1,VCAM-1

**Source**

Human VCAM-1 Protein, Fc Tag, premium grade(VC1-H5253) is expressed from human 293 cells (HEK293). It contains AA Phe 25 - Glu 698 (Accession # [P19320-1](#)).

Predicted N-terminus: Phe 25

*It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.*

**Molecular Characterization**

VCAM-1(Phe 25 - Glu 698) P19320-1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 100.7 kDa. The protein migrates as 126 kDa±5 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 0.01 EU per µg by the LAL method.

**Protein A**

<5 ppm of protein tested by ELISA.

**Host Cell Protein**

<0.5 ng/µg of protein tested by ELISA.

**Host Cell DNA**

<0.02 ng/µg of protein tested by qPCR.

**Sterility**

Negative

**Mycoplasma**

Negative.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

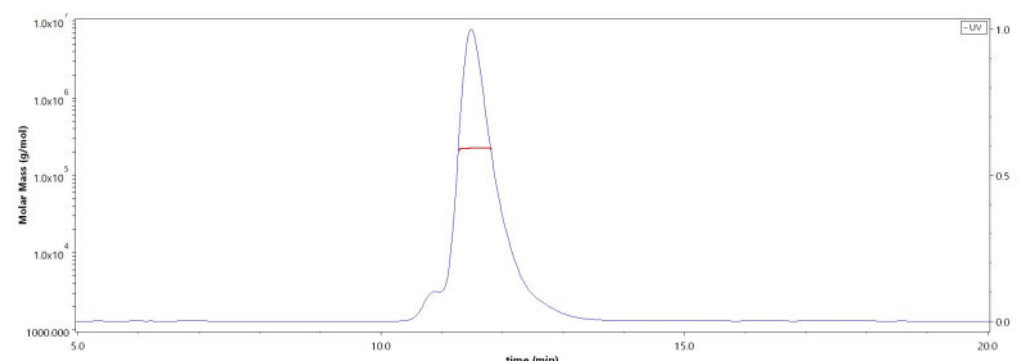
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

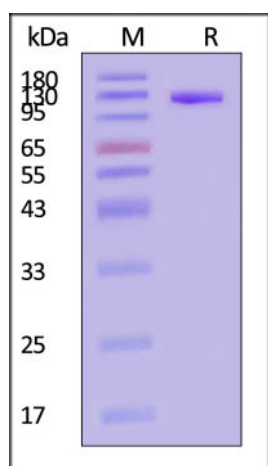
**SDS-PAGE**

**SEC-MALS**



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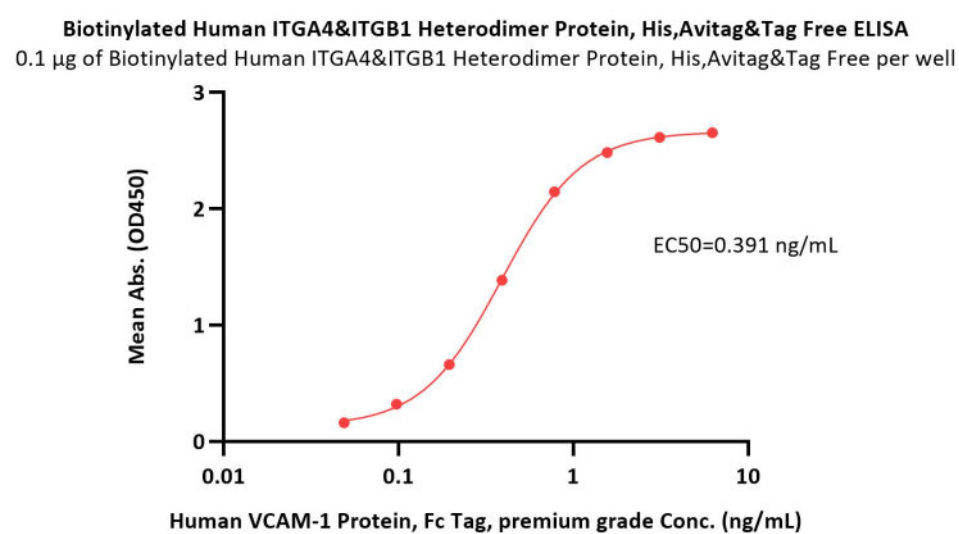
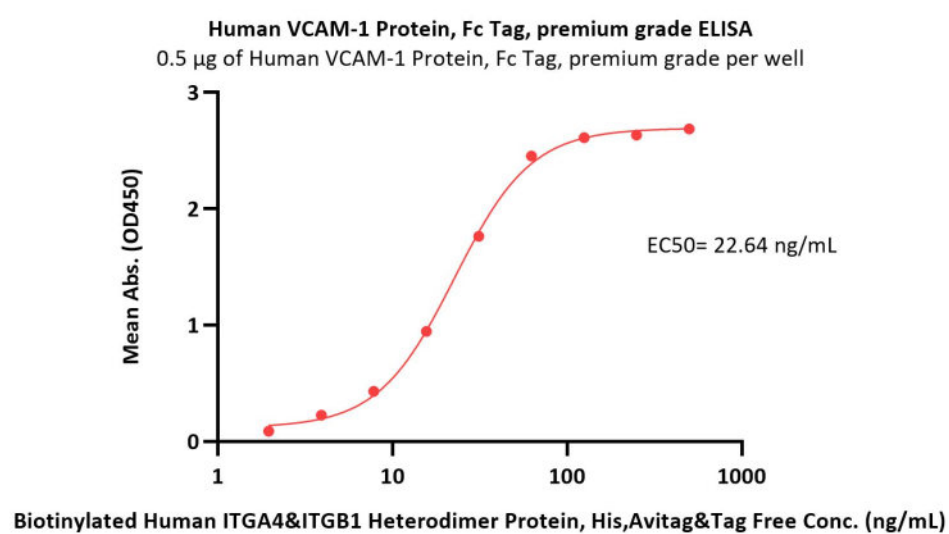


The purity of Human VCAM-1 Protein, Fc Tag, premium grade (Cat. No. VC1-H5253) is more than 85% and the molecular weight of this protein is around 210-250 kDa verified by SEC-MALS.

[Report](#)

Human VCAM-1 Protein, Fc Tag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

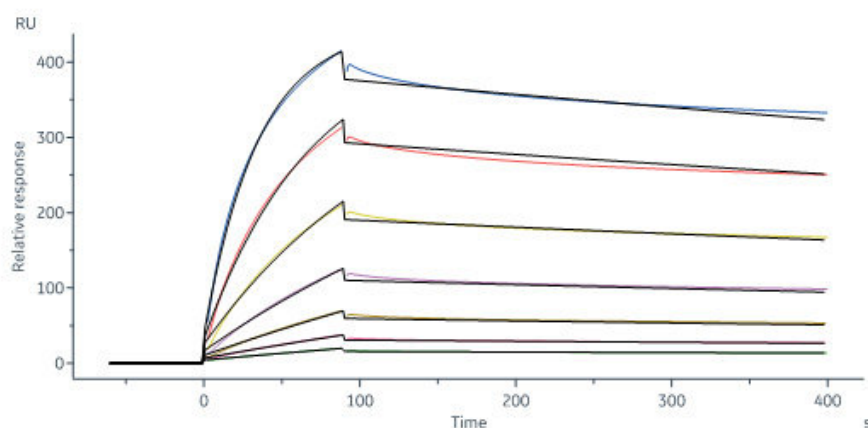
### Bioactivity-ELISA



Immobilized Human VCAM-1 Protein, Fc Tag, premium grade (Cat. No. VC1-H5253) at 5 µg/mL (100 µL/well) can bind Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W1) with a linear range of 2-31 ng/mL (QC tested).

Immobilized Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W1) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Human VCAM-1 Protein, Fc Tag, premium grade (Cat. No. VC1-H5253) with a linear range of 0.049-0.781 ng/mL (Routinely tested).

### Bioactivity-SPR



Human VCAM-1 Protein, Fc Tag, premium grade (Cat. No. VC1-H5253) captured on Protein A Chip can bind Human ITGA4&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52W1) with an affinity constant

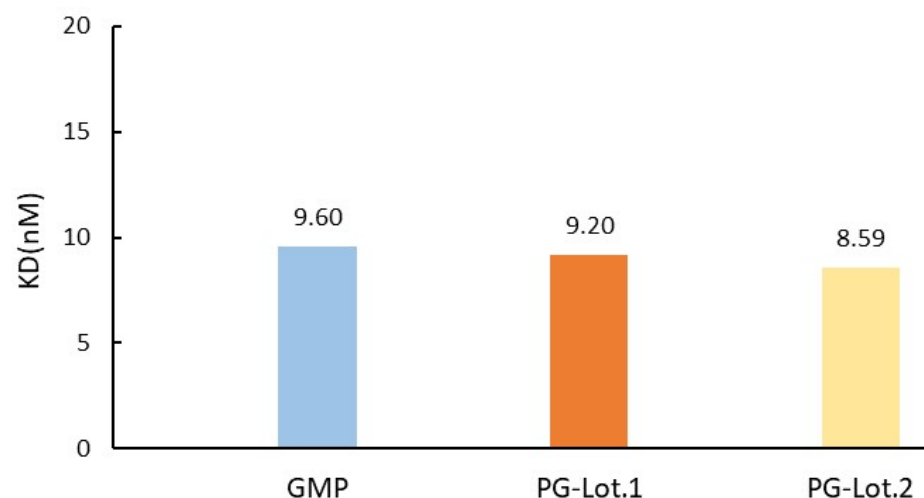
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between 1.00 nM - 50.0 nM as determined in a SPR assay (Biacore 8K) (QC tested).

## Bioactivity-Stability



The SPR based assay shows batch-to-batch consistency between Acro's GMP and PG VCAM-1.

## Background

Vascular cell adhesion protein 1 (VCAM1) is also known as CD106, INCAM-100 and L1CAM, is a cell surface sialoglycoprotein belonging to the immunoglobulin superfamily. VCAM1 / CD106 contains 7 Ig-like C2-type (immunoglobulin-like) domains. CD106 / VCAM-1 is expressed on inflamed vascular endothelium, as well as on macrophage-like and dendritic cell types in both normal and inflamed tissue. L1CAM / VCAM-1 is Important in cell-cell recognition and appears to function in leukocyte-endothelial cell adhesion. CD106 / VCAM1 interacts with the beta-1 integrin VLA4 on leukocytes, and mediates both adhesion and signal transduction. The VCAM1 / VLA4 interaction may play a pathophysiologic role both in immune responses and in leukocyte emigration to sites of inflammation. INCAM-100 / VCAM1 binds to ECMV-D capsid proteins and acts as a receptor for this virus.

## Clinical and Translational Updates

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