

**Synonym**

ICAM1,BB2,CD54,P3.58

**Source**

Biotinylated Human ICAM-1, His,Avitag(IC1-H82E8) is expressed from human 293 cells (HEK293). It contains AA Gln 28 - Glu 480 (Accession # [P05362-1](#)). Predicted N-terminus: Gln 28

**Molecular Characterization**



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™)

The protein has a calculated MW of 53.1 kDa. The protein migrates as 66-90 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Labeling**

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

**Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**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**

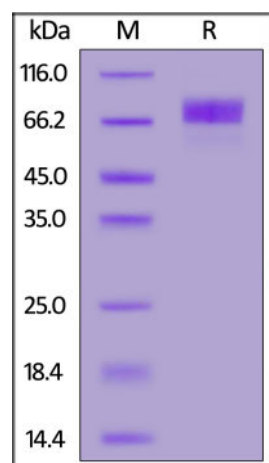
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

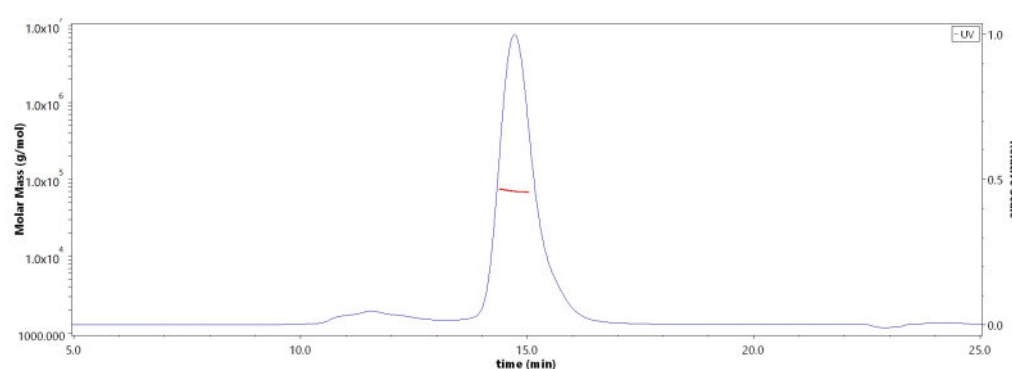
**SDS-PAGE**



Biotinylated Human ICAM-1, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

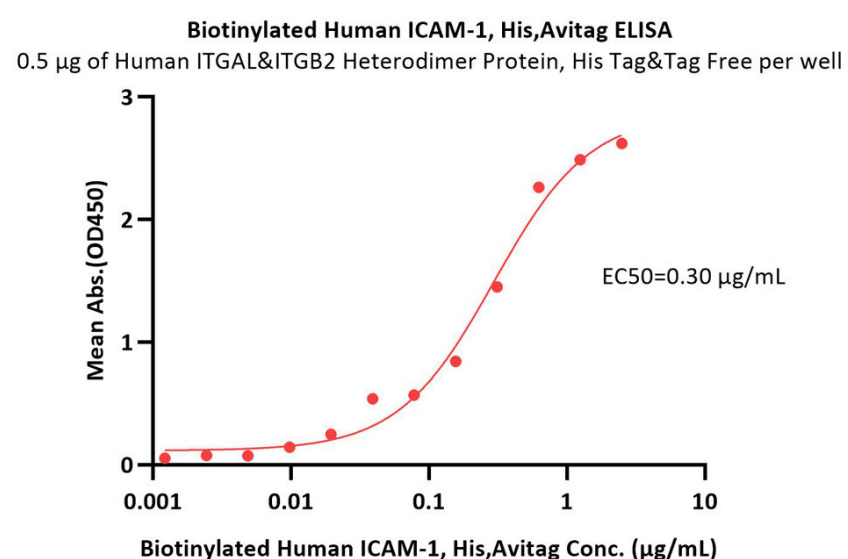
**Bioactivity-ELISA**

**SEC-MALS**



The purity of Biotinylated Human ICAM-1, His,Avitag (Cat. No. IC1-H82E8) is more than 85% and the molecular weight of this protein is around 65-80kDa verified by SEC-MALS.

[Report](#)



Immobilized Human ITGAL&ITGB2 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT2-H53W3) at 5 µg/mL (100 µL/well) can bind Biotinylated Human ICAM-1, His,Avitag (Cat. No. IC1-H82E8) with a linear range of 0.001-0.625 µg/mL (QC tested).

## Background

Inter-Cellular Adhesion Molecule 1 (ICAM-1) is also known as Cluster of Differentiation 54 (CD54), is a member of the immunoglobulin superfamily, and is a cell surface glycoprotein which is typically expressed in low concentrations on endothelial cells and cells of the immune system. The protein encoded by this gene is a type of intercellular adhesion molecule continuously present in low concentrations in the membranes of leukocytes and endothelial cells. Upon cytokine stimulation, the concentrations greatly increase. ICAM-1 can be induced by interleukin-1 (IL-1) and tumor necrosis factor alpha (TNF $\alpha$ ) and is expressed by the vascular endothelium, macrophages, and lymphocytes. ICAM-1 is a ligand for LFA-1 (integrin), a receptor found on leukocytes. When activated, leukocytes bind to endothelial cells via ICAM-1/LFA-1 and then transmigrate into tissues. ICAM-1 has been implicated in subarachnoid hemorrhage (SAH). Levels of ICAM-1 are shown to be significantly elevated in patients with SAH over control subjects in many studies. ICAM-1 expressed by respiratory epithelial cells is also the binding site for rhinovirus, the causative agent of most common colds.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.