Mouse VCAM1 / L1CAM / CD106 Protein (His Tag)

Catalog Number: 50163-M08H

**General Information**

**Gene Name Synonym:**
CD106; Vcam-1

**Protein Construction:**
A DNA sequence encoding the extracellular domain (Met 1-Glu 698) of mouse VCAM1 (NP_035823.3) was fused with a polyhistidine tag at the C-terminus.

**Source:** Mouse

**Expression Host:** HEK293 Cells

**QC Testing**

**Purity:** > 97% as determined by SDS-PAGE

**Bio Activity:**
Measured by the ability of the immobilized protein to support adhesion of U937 human histiocytic lymphoma cells. When 5 x 10^4 cells/well are added to mouse VCAM1 coated plates (10 μg/ml with 100 μl/well), approximately 70%-80% cells will adhere after 1 hour at RT.

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

**Stability:**
Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:**
Phe 25

**Molecular Mass:**
The secreted recombinant mouse VCAM1 consists of 685 amino acids and has a predicted molecular mass of 75.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rmVCAM1 is approximately 90-100 kDa due to glycosylation.

**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**

**Storage:**
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 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 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.

**References**