Mouse VCAM1 / CD106 Protein (His & Fc Tag)

Catalog Number: **50163-M03H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CD106; INCAM-100; VCAM-1; CD106; Vcam-1

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Glu 698) of mouse VCAM1 (NP_035823.3) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 90 % 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 cells are added to VCAM1-coated plates (10 μg/ml, 100 μg/well), approximately >70% cells will adhere specifically.

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 ℃

Predicted N terminal: Phe 25

Molecular Mass:

The recombinant mouse VCAM1/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 922 amino acids and has a predicted molecular mass of 102 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rmVCAM1/Fc monomer is approximately 110-120 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:

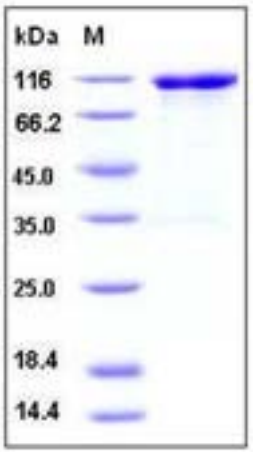
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 α4ß7 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

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