Human ICAM-1 / CD54 Protein (His & Fc Tag)

Catalog Number: **10346-H03H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

BB2; CD54; ICAM-1; P3.58

Protein Construction:

A DNA sequence encoding the human ICAM1 (NP_000192.2) extracellular domain (Met 1-Glu 480) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of PMA-stimulated HSB2 human peripheral blood acute lymphoblastic leukemia cells. When 5 x 10^4 cells/well are added to Recombinant Human ICAM-1/CD54 coated plates (12.5 μg/mL with 100 μL/well), >40% cells will adhere after 1 hour of incubation at 37℃.

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: Gln 28

Molecular Mass:

The recombinant human ICAM1/Fc is a disulfide-linked homodimer. The reduced monomer consists of 700 amino acids and has a predicted molecular mass of 77.4 kDa. As a result of glycosylation, the apparent molecular mass of rh ICAM1/Fc monomer migrates with an apparent molecular mass of 100-110 kDa in SDS-PAGE under reducing conditions.

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:

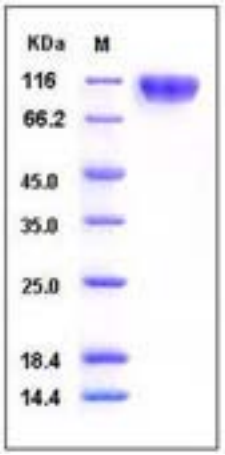
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Intercellular adhesion molecule-1 (ICAM-1, or CD54) is a 90 kDa member of the immunoglobulin (Ig) superfamily and is critical for the firm arrest and transmigration of leukocytes out of blood vessels and into tissues. ICAM-1 is constitutively present on endothelial cells, but its expression is increased by proinflammatory cytokines. The endothelial expression of ICAM-1 is increased in atherosclerotic and transplant-associated atherosclerotic tissue and in animal models of atherosclerosis. Additionally, ICAM-1 has been implicated in the progression of autoimmune diseases. ICAM-1 is a ligand for LFA-1(integrin). When activated, leukocytes bind to endothelial cells via ICAM-1/LFA-1 interaction and then transmigrate into tissues. Presence with heavy glycosylation and other structural characteristics, ICAM-1 possesses binding sites for a number of immune-associated ligands and serves as the binding site for entry of the major group of human Rhinovirus (HRV) into various cell types. ICAM-1 also becomes known for its affinity for Plasmodium falciparum-infected erythrocytes (PFIE), providing more of a role in infectious disease. Previous studies have shown that ICAM-1 is involved in inflammatory reactions and that a defect in ICAM-1 gene inhibits allergic contact hypersensitivity.

References

1.Xu H, *et al.* (2001) The role of ICAM-1 molecule in the migration of Langerhans cells in the skin and regional lymph node. Eur J Immunol. 31(10): 3085-93. 2.Terol MJ, *et al.* (2003) Soluble intercellular adhesion molecule-1 (s-ICAM-1/s-CD54) in diffuse large B-cell lymphoma: association with clinical characteristics and outcome. Ann Oncol. 14(3): 467-74. 3.Mendez MP, *et al.* (2006) Shedding of soluble ICAM-1 into the alveolar space in murine models of acute lung injury. Am J Physiol Lung Cell Mol Physiol. 290(5): L962-70.