**General Information**

**Gene Name Synonym:**
CD54; Icam-1; Ly-47; MALA-2

**Protein Construction:**
A DNA sequence encoding the extracellular domain of mouse ICAM1 (NP_034623.1) (Met 1-Asn 485) was fused with a polyhistidine tag at the C-terminus.

**Source:** Mouse

**Expression Host:** HEK293 Cells

**QC Testing**

**Purity:** > 96 % 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 cells are added to mouse ICAM1 coated plates (12.5 μg/mL, 100 μL/well), approximately > 40% 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 °C

**Predicted N terminal:** Gln 28

**Molecular Mass:**
The recombinant mouse ICAM1 consists of 469 amino acids after removal of the signal peptide, and has a predicted molecular mass of 51.7 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm ICAM1 is approximately 80-90 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.

**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**