Rat ESAM / Endothelial Cell Adhesion Molecule Protein (Fc Tag)

Catalog Number: **80241-R02H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ESAM

Protein Construction:

A DNA sequence encoding the rat ESAM (Q6AYD4) extracellular domain (Met 1-Ala 251) was fused with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

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 30

Molecular Mass:

The recombinant rat ESAM/Fc is a disulfide-linked homodimer. The reduced monomer comprises 463 amino acids and predicts a molecular mass of 51.2 kDa. The apparent molecular mass of the rat ESAM/Fc monomer is approximately 55-60 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:

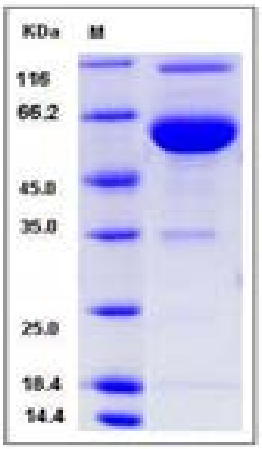
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Endothelial cell-selective adhesion molecule (ESAM) is a member of JAM family of immunoglobulin superfamily and consists of one V-type and one C2-type immunoglobulin domain, as well as a hydrophobic signal sequence, a single transmembrane region, and a cytoplasmic domain. It is specifically expressed at endothelial tight junctions and on activated platelets. ESAM at endothelial tight junctions participates in the migration of neutrophils through the vessel wall, possibly by influencing endothelial cell contacts. The adaptor protein membrane-associated guanylate kinase MAGI-1 has been identified as an intracellular binding partner of ESAM. Previous studies have indicated that ESAM regulates angiogenesis in the primary tumor growth and endothelial permeability. It suggest that ESAM has a redundant functional role in physiological angiogenesis but serves a unique and essential role in pathological angiogenic processes such as tumor growth.

References

1.Ishida T, *et al.* (2003) Targeted disruption of endothelial cell-selective adhesion molecule inhibits angiogenic processes in vitro and in vivo. J Biol Chem. 278(36): 34598-604. 2.Wegmann F, *et al.* (2004) Endothelial adhesion molecule ESAM binds directly to the multidomain adaptor MAGI-1 and recruits it to cell contacts. Exp Cell Res. 300(1): 121-33. 3.Wegmann F, *et al.* (2006) ESAM supports neutrophil extravasation, activation of Rho, and VEGF-induced vascular permeability. J Exp Med. 203(7): 1671-7.