Mouse ALCAM / CD166 Protein (His & Fc Tag)

Catalog Number: **50005-M03H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CD166; MEMD; AI853494; BEN; CD166; DM-GRASP; MuSC; SC1

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Lys 527) of mouse ALCAM (NP_033785.1) 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: > 95 % as determined by SDS-PAGE

Bio Activity:

Immobilized mouse CD6-His (Cat:50711-M08H) at 10 μg/ml (100 μl/well) can bind mouse ALCAM-Fc2h, The EC_{50} of mouse ALCAM-Fc2h is 0.12-0.28 μg/ml.

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: Trp 28

Molecular Mass:

The recombinant mouse ALCAM/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 748 amino acids and has a predicted molecular mass of 84.2 kDa. Due to glycosylation, in SDS-PAGE under reducing conditions, rmALCAM/Fc migrates with approximately molecular mass of 105-110 kDa & 210 kDa corresponding to the monomer and homodimer.

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:

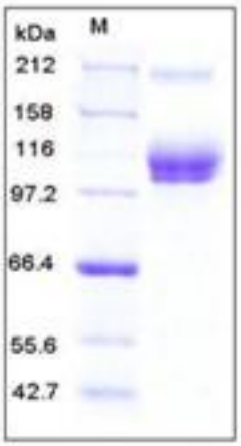
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Activated leukocyte cell adhesion molecule (ALCAM)/Cluster of differentiation (CD166) is a type I transmembrane cell adhesion molecule belonging to the Ig superfamily and a ligand for CD6 that is expressed on T lymphocytes. The extracellular domain of ALCAM contains five Ig-like domains (three Ig-like C2-type domains and two Ig-like V-type domains), of which the amino-terminal V1 domain is essential for ligand binding and ALCAM-mediated cell aggregation. ALCAM mediates both heterophilic (ALCAM-CD6) and homophilic (ALCAM-ALCAM) cell-cell interactions. ALCAM/CD6 interaction plays a role in T cell development and T cell regulation, as well as in the binding of T- and B-cells to activated leukocytes. Recently, homophilic (ALCAM-ALCAM) adhesion was shown to play important roles in tight cell-to-cell interaction and regulation of stem cell differentiation. While expressed in a wide variety of tissues, ALCAM is usually restricted to subsets of cells involved in dynamic growth and/or migration, including neural development, branching organ development, hematopoiesis, immune response and tumor progression. And CD166 is regarded as a potential novel breast cancer indicator and therapeutic target.

References

1.Swart GW. (2002) Activated leukocyte cell adhesion molecule (CD166/ALCAM): developmental and mechanistic aspects of cell clustering and cell migration. Eur J Cell Biol. 81(6): 313-21.
2.Fujiwara H, *et al.* (2003) Human blastocysts and endometrial epithelial cells express activated leukocyte cell adhesion molecule (ALCAM/CD166). J Clin Endocrinol Metab. 88(7): 3437-43.
3.Jezierska A, *et al.* (2006) ALCAM/CD166 protects breast cancer cells against apoptosis and autophagy. Med Sci Monit. 12(8): BR263-73.