Human LAMP1 / CD107a Protein (His Tag)

Catalog Number: **11215-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CD107a; LAMPA; LGP120

Protein Construction:

A DNA sequence encoding the human LAMP1 (NP_005552.3) (Met 1-Met 382) was expressed, with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to bind biotinylated recombinant human Galectin-3 (Cat:10289-HNAE-E) in a functional ELISA.

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: Ala 29

Molecular Mass:

The recombinant human LAMP1 consists of 365 amino acids and predictes a molecular mass of 39.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhLAMP1 is approximately 60-100 kDa due to high levels of 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:

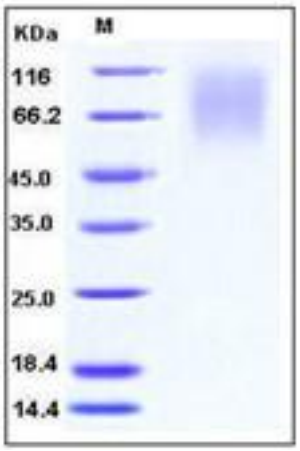
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Lysosome-associated membrane glycoprotein 1, also known as CD107 antigen-like family member A, CD107a, and LAMP1, is a single-pass type I membrane protein which belongs to the LAMP family. CD107a is expressed largely in the endosome-lysosome membranes of cells, but is also found on the plasma membrane (1-2% of total LAMP1). LAMP1 has been implicated in a variety of cellular functions, including cancer metastasis. It has been proposed LAMP1 serves as a therapeutic agent for some cancers, as well as a marker for lysosomal storage disorders and different cell types such as cytotoxic T cells. LAMP2, also known as CD107b, may also play a role in tumor cell metastasis and functions in the protection, maintenance, and adhesion of the lysosome. Cell surface LAMP1 and LAMP2 have been shown to promote adhesion of human peripheral blood mononuclear cells (PBMC) to vascular endothelium, therefore they are possibly involved in the adhesion of PBMCs to the site of inflammation. LAMP-1 is a glycoprotein highly expressed in lysosomal membranes. The present study was initiated to test LAMP-1 mRNA and protein levels in post mortem frontal cortex (area 8) of Alzheimer's disease (AD) stages I-IIA/B and stages V-VIC of Braak and Braak, compared with age-matched controls. LAMP-1 occurred in microglia and multinucleated giant cells in one AD case in whom amyloid burden was cleared following betaA-peptide immunization. In addition, LAMP-1 has been suggested to be a cell surface receptor for a specific amelogenin isoform, leucine-rich amelogenin peptide or LRAP. LAMP-1 can serve as a cell surface binding site for amelogenin on dental follicle cells and cementoblasts.

References

1.Parkinson-Lawrence EJ, *et al.* (2005) Immunochemical analysis of CD107a (LAMP-1). Cell Immunol. 236(1-2): 161-6. 2.Barrachina M, *et al.* (2006) Lysosome-associated membrane protein 1 (LAMP-1) in Alzheimer's disease. Neuropathol Appl Neurobiol. 32(5): 505-16. 3.Zhang H, *et al.* (2010) Full length amelogenin binds to cell surface LAMP-1 on tooth root/periodontium associated cells. Arch Oral Biol. 55(6): 417-25.