Data Sheet (Cat.No.TMPJ-00837)

TargetMol

LAMP1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Lysosomal membrane glycoprotein A;CD107a;LAMP-1;CD107 antigen-like family member A; 120 kDa lysosomal membrane glycoprotein;Lysosome-associated membrane protein 1;LGP-120;LGP-A;P2B;Lysosome-associated membrane glycoprotein 1
Protein Construction:	Leu25-Asn370
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P11438
Molecular Weight:	55-110 KDa (reducing condition)
AA Sequence:	Leu25-Asn370

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Lysosomal associated membrane protein 1 (LAMP1) is an approximately 120 kDa transmembrane glycoprotein that is a major protein component of lysosomal membranes. Mature mouse LAMP1 consists of a 346 amino acid (aa) intralumenal domain (ECD), a 24 aa transmembrane segment, and a 12 aa cytoplasmic tail. Its lumenal domain is organized into two heavily N-glycosylated regions separated by a Ser/Pro-rich linker that carries a

minor amount of O-linked glycosylation. Within the lumenal domain, mouse LAMP1 shares approximately 64% and 82% aa sequence identity with human and rat LAMP1, respectively. The sorting of LAMP1 to lysosomes relies on a tyrosine motif in the cytoplasmic tail. In cytotoxic T cells and mast cells, LAMP1 is expressed in the membranes of intracellular granules that contain effector molecules such as perforin, granzymes, eicosanoids, and histamine. A glycoform of LAMP1 known as M150 is expressed on the surface of activated macrophages where it promotes T cell co-stimulation and a Th1 biased immune response. Exposure of epithelial cells to pathogenic Neisseria bacteria induces the redistribution of LAMP1 to the cell surface where it can be cleaved by the Neisseria IgA1 protease.

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