



Recombinant Protein Technical Manual

Recombinant Mouse LAMP1/CD107a Protein (His Tag)

RPES1161

Product Data:

Product SKU: RPES1161

Size: 10µg

Species: Mouse

Expression host: Human Cells

Uniprot: P11438

Protein Information:

Molecular Mass: 38.6 kDa

AP Molecular Mass: 55-94 kDa

Tag: C-His

Bio-activity:

Purity: > 95% as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Lysosome-associated membrane glycoprotein 1; LAMP; Lysosome-associated membrane protein 1; 120 kDa lysosomal membrane glycoprotein; CD107 antigen-like family member A; LGP20; Lysosomal membrane glycoprotein A; LGP-A; P2B; CD107a

Immunogen Information:

Sequence: Leu25-Asn370

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) intraluminal domain (ECD), a 24 aa transmembrane segment, and a 12 aa cytoplasmic tail. Its luminal 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 luminal 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.