

LAMP2 Protein, Human, Recombinant (His)

General Information

Synonyms:	lysosomal-associated membrane protein 2;LAMP-2;CD107b;LAMPB;LGP110
Protein Construction:	A DNA sequence encoding the human LAMP2 (NP_054701.1) (Met1-Ile375) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Leu 29
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P13473-2
Molecular Weight:	39.77 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

LAMP2 (Lysosomal Associated Membrane Protein 2) is a Protein Coding gene. LAMP2, also known as CD107b (Cluster of Differentiation 107b), is a member of a family of membrane glycoproteins. This glycoprotein provides selectins with carbohydrate ligands. It may play a role in tumor cell metastasis. It may also function in the protection, maintenance, and adhesion of the lysosome. In humans, LAMP2, the causative gene of Danon disease, located on chromosome Xq24, encodes the lysosome-associated membrane protein-2 (LAMP-2). LAMP-2

deficiency, or Danon disease, is a rare X-linked lysosomal disease characterized by cardiomyopathy, vacuolar myopathy, and mental retardation. LAMP2 cardiomyopathy is an X-linked and highly progressive myocardial storage disorder associated with diminished survival, which clinically resembles sarcomeric hypertrophic cardiomyopathy.

Reference

Maron BJ, et al. (2010) Profound left ventricular remodeling associated with LAMP2 cardiomyopathy. *Am J Cardiol.* 106(8): 1194-6.

Di Blasi C, et al. (2008) Danon disease: a novel LAMP2 mutation affecting the pre-mRNA splicing and causing aberrant transcripts and partial protein expression. *Neuromuscul Disord.* 18(12): 962-6.

Echaniz-Laguna A, et al. (2006) Novel Lamp-2 gene mutation and successful treatment with heart transplantation in a large family with Danon disease. *Muscle Nerve.* 33(3): 393-7.

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