

LAMP1/CD107a Protein, Mouse (HEK293, His)

Cat. No.:	HY-P72526
Synonyms:	Lysosome-associated membrane glycoprotein 1; LAMP-1; LGP-A; CD107a; LAMPA; P2B
Species:	Mouse
Source:	HEK293
Accession:	P11438 (L25-N370)
Gene ID:	16783
Molecular Weight:	55-94 kDa

PROPERTIES

AA Sequence	<pre> L F E V K N N G T T C I M A S F S A S F L T T Y E T A N G S Q I V N I S L P A S A E V L K N G S S C G K E N V S D P S L T I T F G R G Y L L T L N F T K N T T R Y S V Q H M Y F T Y N L S D T E H F P N A I S K E I Y T M D S T T D I K A D I N K A Y R C V S D I R V Y M K N V T V V L R D A T I Q A Y L S S G N F S K E E T H C T Q D G P S P T T G P P S P S P P L V P T N P T V S K Y N V T G N N G T C L L A S M A L Q L N I T Y L K K D N K T V T R A F N I S P N D T S S G S C G I N L V T L K V E N K N R A L E L Q F G M N A S S S L F F L Q G V R L N M T L P D A L V P T F S I S N H S L K A L Q A T V G N S Y K C N T E E H I F V S K M L S L N V F S V Q V Q A F K V D S D R F G S V E E C V Q D G N N </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	LAMP1/CD107a, a lysosomal membrane glycoprotein, assumes a crucial role in lysosome biogenesis, lysosomal pH regulation, autophagy, and cholesterol homeostasis. It serves as a direct inhibitor of the proton channel TMEM175, playing a pivotal role in lysosomal lumen pH regulation and facilitating optimal lysosomal acidification for efficient hydrolase activity.
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Additionally, LAMP1 is integral to NK-cell cytotoxicity, participating in cytotoxic granule movement to the cell surface and perforin trafficking to the lytic granule. Remarkably, it safeguards NK-cells from degranulation-associated damage induced by their own cytotoxic granule content. LAMP1's involvement in presenting carbohydrate ligands to selectins, its role in tumor cell metastasis, and its interactions with proteins such as ABCB9 and FURIN underscore its multifaceted contributions to cellular processes. Notably, the interaction with TMEM175 highlights its inhibitory role in the proton channel activity of TMEM175, further emphasizing its regulatory function in lysosomal processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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