Recombinant LAMP2 protein (His tag)

Catalog Number	537523
Synonyms	LAMP-2; Lysosome-associated membrane protein 2; CD107 antigen-like family member B; LGP-96; CD antigen CD107b
Species	Human
Expression System	E. coli
Accession	P13473
Molecular Weight	Predictes a molecular mass of 39.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	29-375
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 29-375 aa (P13473) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human LAMP-2 (Lysosome-associated membrane glycoprotein 2) Fragment (residues 29-375) is a high-purity protein product designed for lysosomal biology and autophagy research. This 347-amino acid fragment has been computationally selected for optimal stability and solubility, making it an ideal tool for structural studies, biochemical assays, and functional investigations into lysosomal membrane dynamics and protein degradation pathways. Lysosome-associated membrane glycoprotein 2 (LAMP-2) is a critical lysosomal membrane protein essential for lysosome biogenesis, pH regulation, and multiple autophagy pathways. The full-length protein functions as a key regulator of chaperone-mediated autophagy by binding target proteins such as GAPDH, NLRP3, and MLLT11 for lysosomal degradation. It facilitates lysosomal acidification through direct inhibition of the proton channel TMEM175 and is required for autophagosome-lysosome fusion during macroautophagy. LAMP-2 also plays a role in MHC class II-mediated antigen presentation of exogenous antigens. The protein localizes primarily to lysosomal membranes but shuttles between lysosomes, endosomes, and the plasma membrane, functioning as a single-pass type I membrane protein. This fragment represents a stable, soluble unit of the protein that maintains relevance to these fundamental cellular processes.