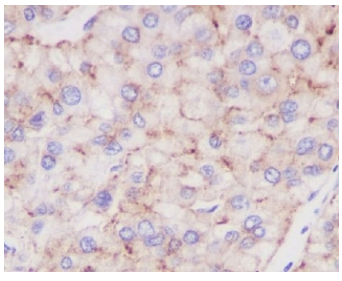
LAMP2A Antibody / Chaperone-Mediated Autophagy Receptor Antibody [clone DIE-12] (RQ5402)

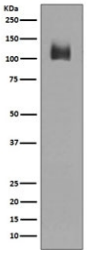
Catalog No.	Formulation	Size
RQ5402	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

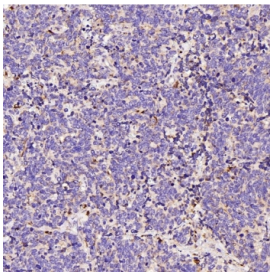
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	DIE-12
Purity	Affinity purified
UniProt	P13473
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry (FFPE) : 1:50-1:600
Limitations	This LAMP2A Antibody / Chaperone-Mediated Autophagy Receptor Antibody is available for research use only.



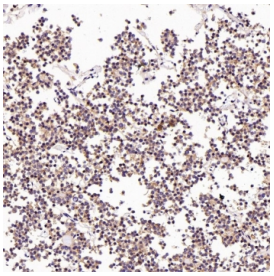
LAMP2A Antibody Human Liver Cancer IHC. Immunohistochemical staining of FFPE human liver cancer tissue using LAMP2A antibody demonstrated predominantly cytoplasmic staining consistent with the lysosomal localization of LAMP2A. Heat-induced epitope retrieval was performed by boiling tissue sections in pH6, 10 mM citrate buffer for 10-20 minutes followed by cooling prior to staining. The observed staining pattern is consistent with expression of the chaperone-mediated autophagy receptor in malignant hepatic cells. This LAMP2A Antibody, also called a Chaperone-Mediated Autophagy Receptor Antibody, is useful for investigating lysosomal biology, chaperone-mediated autophagy, and protein quality control in cancer tissues.



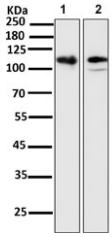
LAMP2A Antibody Human Choriocarcinoma Cell WB. Western blot testing of human JAR choriocarcinoma cell lysate using LAMP2A antibody detected a prominent band at approximately 100-110 kDa. Although the predicted core protein is smaller, LAMP2A is extensively N-linked glycosylated, producing an apparent molecular weight that commonly ranges from approximately 45-110 kDa depending on cell type and glycosylation status. The strong high-molecular-weight band observed is consistent with the mature glycosylated form of LAMP2A. This LAMP2A Antibody, also called a Chaperone-Mediated Autophagy Receptor Antibody, is suitable for studies of chaperone-mediated autophagy, lysosomal biology, and protein quality control.



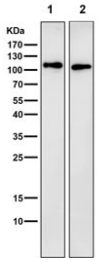
LAMP2A Antibody Human Small Cell Lung Cancer IHC. Immunohistochemical staining of FFPE human small cell lung cancer tissue using LAMP2A antibody demonstrated predominantly cytoplasmic staining in tumor cells, consistent with the lysosomal localization of LAMP2A. Heat-induced epitope retrieval was performed by boiling tissue sections in pH6, 10 mM citrate buffer for 10-20 minutes followed by cooling prior to staining. The staining pattern is consistent with expression of the chaperone-mediated autophagy receptor in malignant pulmonary tissue. This LAMP2A Antibody, also called a Chaperone-Mediated Autophagy Receptor Antibody, is useful for investigating lysosomal function, chaperone-mediated autophagy, and cancer cell stress responses.



LAMP2A Antibody Human Pituitary Tumor IHC. Immunohistochemical staining of FFPE human pituitary tumor tissue using LAMP2A antibody demonstrated predominantly cytoplasmic staining in neoplastic cells, consistent with the lysosomal localization of LAMP2A. Heat-induced epitope retrieval was performed by boiling tissue sections in pH6, 10 mM citrate buffer for 10-20 minutes followed by cooling prior to staining. The widespread cytoplasmic immunoreactivity is consistent with expression of the chaperone-mediated autophagy receptor in pituitary tumor tissue. This LAMP2A Antibody, also called a Chaperone-Mediated Autophagy Receptor Antibody, is useful for investigating lysosomal biology, chaperone-mediated autophagy, and neuroendocrine tumor biology.



LAMP2A Antibody Human and Rat WB. Western blot testing of human HeLa (lane 1) and rat spleen (lane 2) lysates using LAMP2A antibody detected a prominent band at approximately 110 kDa in both samples. Although the predicted core protein is smaller, LAMP2A undergoes extensive N-linked glycosylation, resulting in an apparent molecular weight that commonly ranges from approximately 45-110 kDa depending on the degree of glycosylation and cell type. The observed bands are consistent with the mature glycosylated form of LAMP2A. This LAMP2A Antibody, also called a Chaperone-Mediated Autophagy Receptor Antibody, is suitable for studies of chaperone-mediated autophagy, lysosomal biology, and cellular protein homeostasis.



LAMP2A Antibody Mouse and Rat Liver WB. Western blot testing of mouse liver (lane 1) and rat liver (lane 2) tissue lysates using LAMP2A antibody detected a prominent band at approximately 100-110 kDa in both samples. Although the predicted core protein is smaller, LAMP2A undergoes extensive N-linked glycosylation, resulting in an apparent molecular weight that commonly ranges from approximately 45-110 kDa depending on glycosylation status and tissue type. The observed bands are consistent with the mature glycosylated form of LAMP2A. This LAMP2A Antibody, also called a Chaperone-Mediated Autophagy Receptor Antibody, is suitable for studies of chaperone-mediated autophagy, lysosomal biology, and protein homeostasis.

Description

LAMP2A Antibody / Chaperone-Mediated Autophagy Receptor Antibody, clone DIE-12, recognizes LAMP2A, one of three major splice variants encoded by the LAMP2 gene. Unlike the LAMP2B and LAMP2C isoforms, LAMP2A contains a

unique cytoplasmic tail that enables its specialized function as the lysosomal receptor for chaperone-mediated autophagy (CMA). This selective autophagy pathway transports soluble cytosolic proteins directly across the lysosomal membrane for degradation, allowing cells to maintain protein quality control without forming autophagosomes. Because LAMP2A serves as the rate-limiting receptor for CMA, its abundance and regulation directly influence cellular proteostasis, stress adaptation, and survival.

During chaperone-mediated autophagy, proteins containing a KFERQ-like targeting motif are recognized by heat shock cognate protein 70 and associated co-chaperones in the cytoplasm. These substrate proteins are delivered to the lysosomal membrane, where they bind LAMP2A. Following substrate recognition, LAMP2A molecules assemble into a multimeric translocation complex that enables unfolded proteins to cross the lysosomal membrane for degradation within the lysosomal lumen. This highly selective pathway differs from macroautophagy by targeting individual proteins rather than bulk cytoplasmic material. Consequently, LAMP2A has become a central research target in studies of protein turnover, lysosomal biology, oxidative stress responses, and cellular adaptation to nutrient deprivation.

LAMP2A has attracted considerable attention in aging and disease research because chaperone-mediated autophagy declines with age, contributing to the accumulation of damaged or misfolded proteins. Reduced LAMP2A activity has been implicated in neurodegenerative disorders including Parkinson disease, Alzheimer disease, and Huntington disease, while altered expression has also been associated with metabolic disorders, liver disease, and immune regulation. In cancer, the role of LAMP2A is complex and context dependent. Many tumors exhibit elevated chaperone-mediated autophagy, enabling malignant cells to survive metabolic stress, resist chemotherapy, and adapt to hostile microenvironments. As a result, modulation of LAMP2A activity is being investigated as a potential therapeutic strategy in oncology and other diseases involving dysregulated proteostasis.

Because LAMP2A is distinct from the LAMP2B and LAMP2C isoforms, isoform-specific reagents are particularly valuable for distinguishing chaperone-mediated autophagy from other lysosomal functions mediated by the LAMP2 family. Measurement of LAMP2A expression is frequently combined with analyses of lysosomal markers, autophagy regulators, heat shock proteins, and protein quality control pathways to better understand cellular responses to stress. A LAMP2A Antibody is a valuable research tool for investigating chaperone-mediated autophagy, lysosomal function, neurodegeneration, aging, cancer biology, and cellular protein homeostasis.

Explore additional research tools for lysosomal biology, chaperone-mediated autophagy, and selective protein degradation on our Autophagy Antibodies page.

Application Notes

Optimal dilution of the LAMP2A Antibody / Chaperone-Mediated Autophagy Receptor Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to the LAMP-2A isoform of human LAMP2 was used as the immunogen for the LAMP2A antibody.

Storage

Store the LAMP2A antibody at -20oC.

Alternate Names

LAMP2A antibody, Lysosome Associated Membrane Glycoprotein 2A antibody, Lysosome Associated Membrane Protein 2A antibody, Chaperone-Mediated Autophagy Receptor antibody, Lysosomal Associated Membrane Protein 2A antibody

Copyright © NSJ Bioreagents. All rights reserved.