Product Datasheet

LAMP-1/CD107a Antibody - BSA Free
NB120-19294

Unit Size: 100 ug

Store at -20C. Avoid freeze-thaw cycles.

Reviews: 2 Publications: 38

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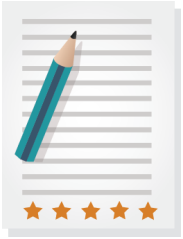
Updated 2/21/2025 v.20.1



NB120-19294

LAMP-1/CD107a Antibody - BSA Free

Product Information

Unit Size	100 ug
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.1% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	0.02M tris (pH 7.4) and 0.1M glycine

Product Description

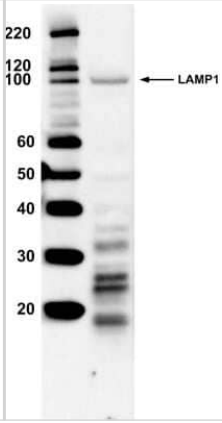
Host	Rabbit
Gene ID	3916
Gene Symbol	LAMP1
Species	Human, Mouse, Rat
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 22453828). Rat reactivity reported in scientific literature (PMID: 22544351).
Marker	Late Endosome Marker
Specificity/Sensitivity	LAMP1 - Lysosome Marker
Immunogen	Synthetic peptide corresponding to residues C K(407) R S H A G Y Q T I(416) of human LAMP1.

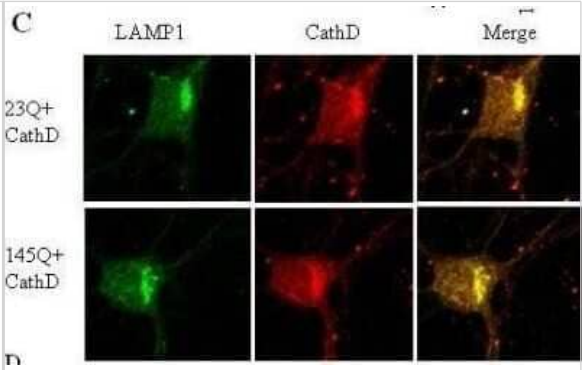
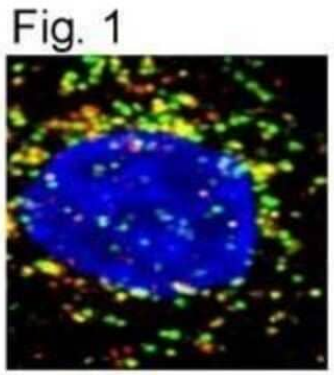
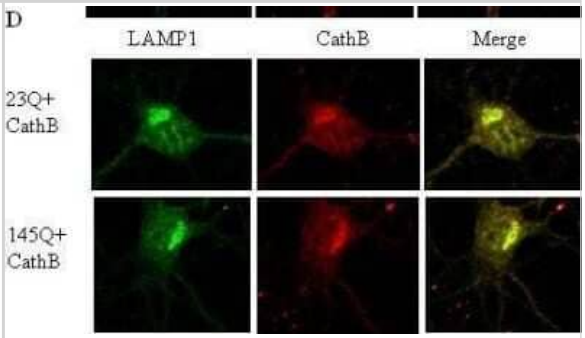
Product Application Details

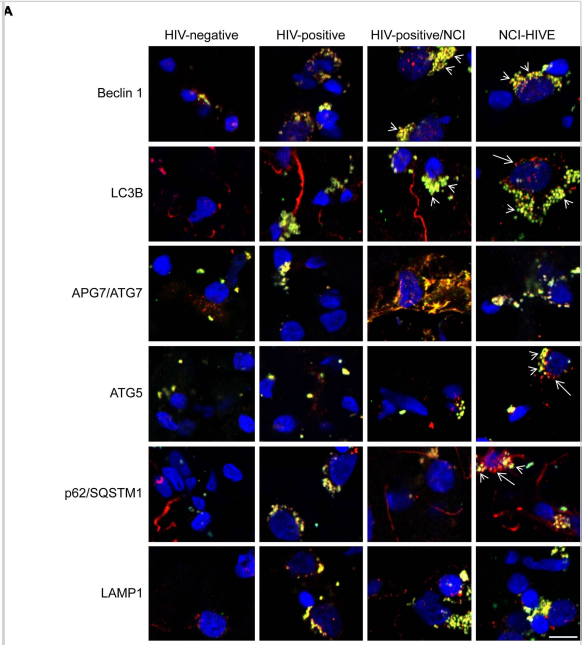
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:100 - 1:2000, Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence 1:10 - 1:500, Immunohistochemistry-Paraffin 1:10 - 1:500
Application Notes	ICC usage was reported and validated in scientific literature. Reactivity for this application may vary lot to lot.

Images

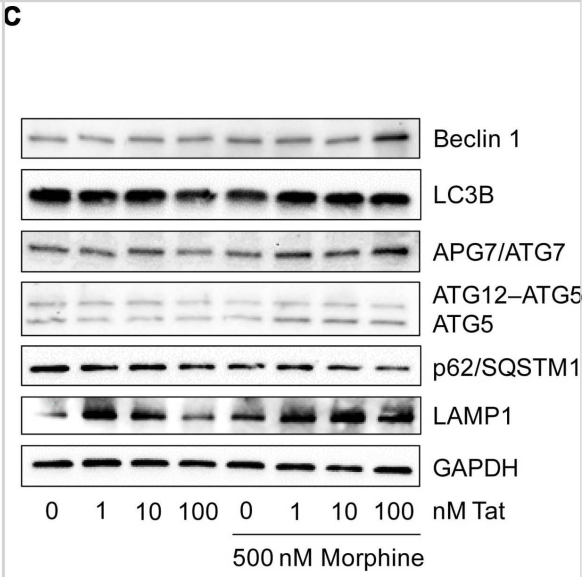
Western Blot: LAMP-1/CD107a Antibody [NB120-19294] - Analysis of 20 ug of HeLa cell lysate and 5 ul of Molecular Weight Protein Ladder per well.



Immunocytochemistry/Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - Cathepsin D (CathD) expression and localization in primary neurons. Colocalization of transfected CathD with LAMP-1/CD107a. CathD transfected neurons were examined by co-immunostaining of LAMP-1/CD107a and CathD. Yellow colored cytoplasmic spots are indicative of co-localization of transfected cathepsins and LAMP-1/CD107a. Scale bar = 10 micron. Image collected and cropped by CiteAb from the following publication (https://molecularneurodegeneration.biomedcentral.com/articles/10.1186/1750-1326-6-37), licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - Lamp1 (red) in HeLa cells.	
Immunocytochemistry/Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - Cathepsin B (CathB) expression and localization in primary neurons. Colocalization of transfected CathB with LAMP-1/CD107a. CathB transfected neurons were examined by co-immunostaining of LAMP-1/CD107a and CathB. Yellow colored cytoplasmic spots are indicative of co-localization of transfected cathepsins and LAMP-1/CD107a. Scale bar = 10 micron. Image collected and cropped by CiteAb from the following publication (https://molecularneurodegeneration.biomedcentral.com/articles/10.1186/1750-1326-6-37), licensed under a CC-BY license.	

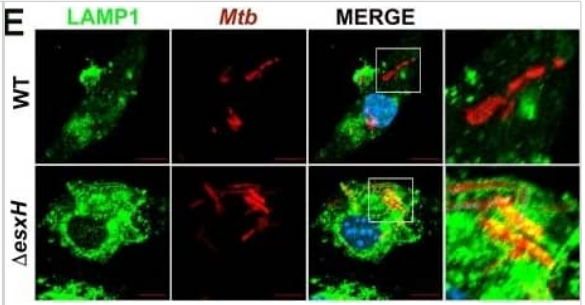


Autophagy associated protein immunoreactivity in HIV-infected brain tissue. (A) Representative images from five randomly selected fields of cells each examined in duplicate frontal lobe white matter sections for the indicated subject groups. The indicated proteins were labeled red & microglia with the cell-type-specific marker Iba1 (green). Blue staining indicates cell nuclei. Arrow heads indicate examples of higher Iba1 immunoreactivity whereas arrows indicate more focal (punctal) vs. diffuse (filamentous) patterns of autophagy associated protein expression. Scale bar = 10 μm. (B) Quantification of relative Iba1 immunoreactivity from (A). $F(3,20) = 6.450$, $p = 0.0031$; □$p < 0.05$ when compared to all other subject groups. Error bars show the SEM for the average values of 2–6 regions from each subject group across the six autophagy associated proteins examined. (C) Quantification of the indicated autophagy associated protein relative immunoreactivity from (A). Beclin 1: $F(3,12) = 11.29$, $p = 0.0008$; LC3B: $F(3,12) = 1.994$, $p = 0.1687$; APG7/ATG7: $F(3,12) = 84.20$, $p = < 0.0001$; ATG5: $F(3,12) = 6.218$, $p = 0.0086$; p62/SQSTM1: $F(3,12) = 87.04$, $p = < 0.0001$; LAMP1: $F(3,12) = 8.317$, $p = 0.0029$. □$p < 0.05$ when compared to HIV-negative; #$p < 0.05$ when compared to HIV-positive; & Ω$p < 0.05$ when compared to HIV-positive/NCI subjects. Error bars show the SEM for four regions from each subject group. Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/Article/10.3389/fmicb.2015.00653/abstract), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

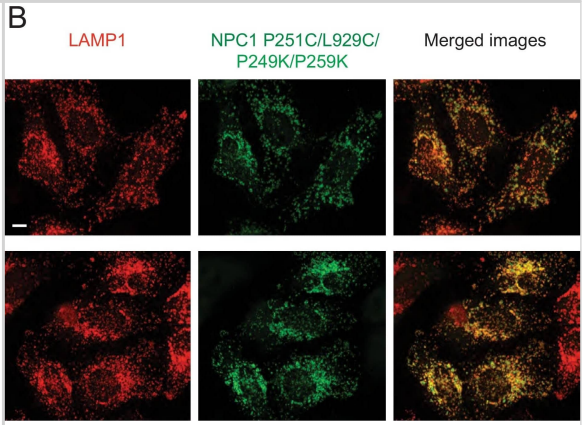


Differences in neuronal autophagy & dendrite varicosity following HIV-1 Tat protein & morphine treatment. (A) Representative images of neurons transfected with a fluorescent reporter plasmid to monitor autophagic flux at 8 h following the indicated treatments. GFP (green) & GFP + mRFP (yellow) fluorescence are observed prior to the fusion of autophagosomes with lysosomes whereas only mRFP (red) fluorescence is present in post-fusion autolysosomes. DIC, differential interference contrast microscopy image. DAPI (blue) staining indicates cell nuclei. (B) Quantification of autolysosomes (red puncta) from (A). $F(3,13) = 8.756$, $p = 0.0019$; □$p < 0.05$ when compared to all other groups. (C) Western blotting analysis of the indicated autophagy associated protein levels at 24 h following the indicated treatments. GAPDH was used as a loading control. Blots are representative of three independent experiments. (D) Quantification of dendrite beading from (A). $F(3,77) = 6.429$, $p = 0.0006$; □$p < 0.05$ when compared to control cells. Error bars show the SEM. Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/Article/10.3389/fmicb.2015.00653/abstract), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

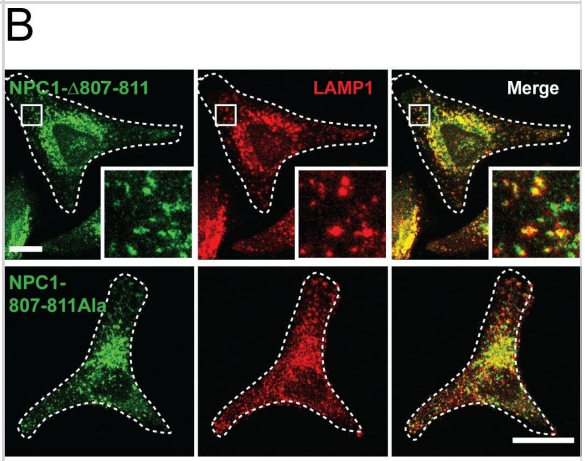
Immunocytochemistry/ Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - EsxG-EsxH alters phagosomal GAL3, ubiquitin, & LAMP1. (A, C, & E) IF images of GAL3 (A), ubiquitin (FK2 antibody) (C), & LAMP1 (E) in BMDMs that were infected with DsRed-expressing H37Rv (WT) or the ΔesxH mutant for 3 h. Images are maximum-intensity projections. Scale bar, 10 µm. Boxed areas in the merged image are shown in higher magnification in the rightmost panel. Mtb, M. tuberculosis. (B, D, & F) Automated image analysis was used to quantify the MFI of GAL3 (B), ubiquitin (D), & LAMP1 (F) colocalized with individual bacilli from 5 fields of a 12-mm coverslip. Data are means ± SEM from one representative experiment from three (A, B, E, & F) or two (C & D) independent experiments. ****, P ≤ 0.0001, Student's t test. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/30482832), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



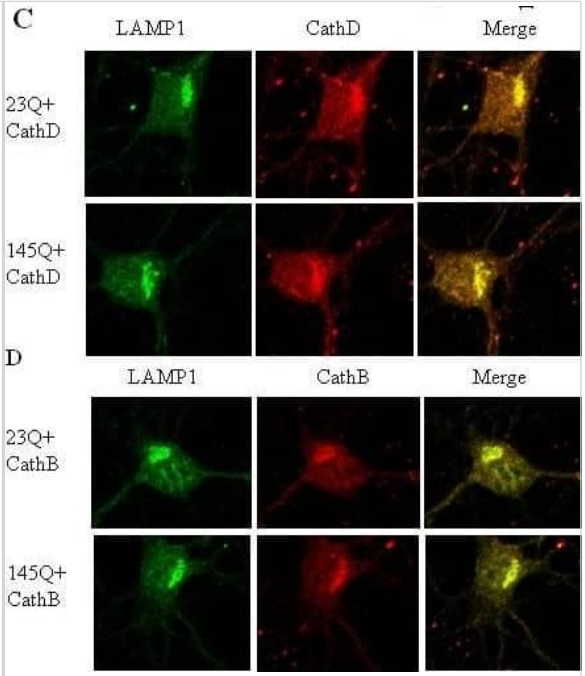
Immunocytochemistry/ Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - Characterization of selected mutant protein glycosylation status or localization.(A) Two independent, representative experiments to analyze the glycosylation status of GFP-NPC1 wild type & GFP-NPC1 P251C/L929C, as determined by immunoblot of indicated samples with anti-GFP antibodies after 6% SDS PAGE; samples were incubated at 70°C in SDS PAGE sample buffer for 10 min prior to loading. Molecular weight markers are shown at left in kilodaltons here & in all subsequent gels shown. (B), Localization of NPC1 P251/L929C/P249K/P259K in NPC1−/− HeLa cells as in Figure 1C. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32410728), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



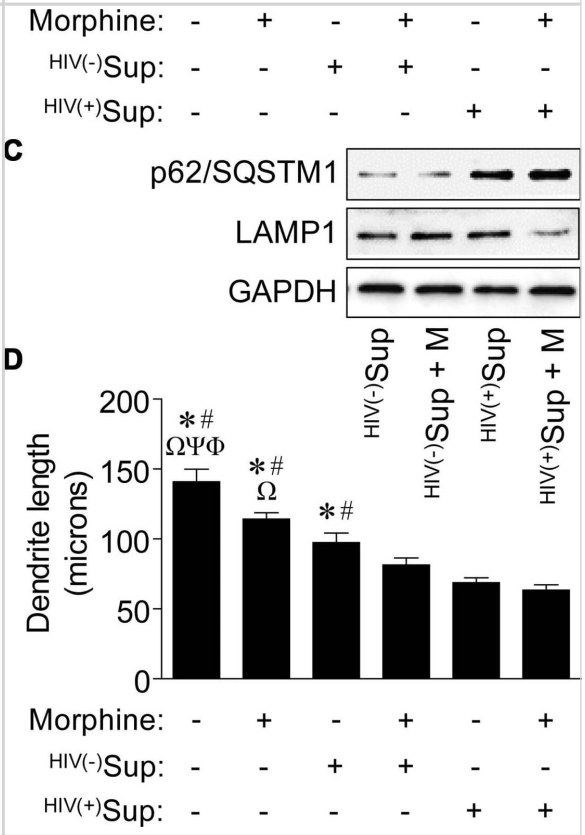
Immunocytochemistry/ Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - NPC1 Δloop mutant cannot rescue cholesterol export from lysosomes.(A) Cholesterol-cross-linked peptides (Hulce et al., 2013) are highlighted in red for two orientations of the crystal structure of N-terminal domain- & first transmembrane domain-deleted NPC1 (PDBID: 5u74). The disordered cytoplasmic loop residues 800–814 are shown as a blue dotted line. (B) Confocal immunofluorescence microscopy analysis of the localization of mouse NPC1-Δ807–811, NPC1-807-811Ala & LAMP1 proteins in HeLa cells (bar, 20 µm). White boxes in images indicate regions of cells enlarged in the insets shown at the lower right of each image. (C) Confocal immunofluorescence microscopy of cholesterol accumulation rescue. NPC1−/− HeLa cells were transfected with GFP-tagged mouse NPC1-Δ807–811 or mouse NPC1-807-811Ala plasmids for 48 h & assayed for cholesterol accumulation rescue as in Figure 1 (bar, 20 µm). (D) Quantitation of cholesterol accumulation rescue using flow cytometry. GFP-positive cells with similar expression levels were analyzed: 2480 NPC1; 427 NPC1 -Δ807–811; 764 NPC1-807-811Ala; LAMP1 expressing control, 1753 cells counted. Shown are the normalized data from mean fluorescence intensity flow cytometry values. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32410728), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



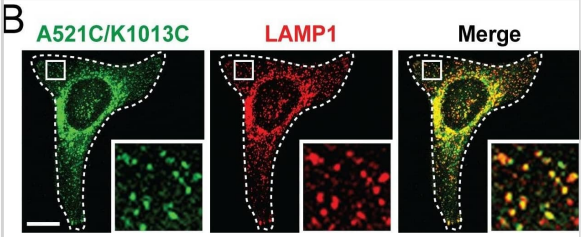
Immunocytochemistry/ Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - Cathepsin D (CathD) & B (CathB) expression & localization in primary neurons. A. Western blot analyses of CathD & CathB protein levels after transfection. Primary cortical neurons were transfected with 23QHtt, 23QHtt plus CathD, 23QHtt plus CathB, 145QmHtt, 145QmHtt plus CathD & 145QmHtt plus CathB constructs. Western blot analyses were performed with anti-CathD & anti-CathB antibodies. β-actin western blots were used as loading controls. Relative expression levels were quantified by band intensity. Positions of molecular weight markers were indicated. Quantification of the western blots are shown in the bar graphs. *p < 0.05 compared to without cathepsin transfection. B. Analyses of CathD & CathB enzymatic activities after transfection. Primary cortical neurons were transfected with CathD, CathB & as described in A. CathD & CathB activities were assayed by CathD or CathB activity assay kit. *p < 0.05 compared to without cathepsin transfection. C & D. Colocalization of transfected CathD (C) & CathB (D) with LAMP-1. CathD & CathB transfected neurons were examined by co-immunostaining of LAMP-1 & CathD or CathB. Yellow colored cytoplasmic spots are indicative of co-localization of transfected cathepsins & LAMP-1. Scale bar = 10 micron. Image collected & cropped by CiteAb from the following publication (https://molecularneurodegeneration.biomedcentral.com/articles/10.1186/1750-1326-6-37), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: LAMP-1/CD107a Antibody [NB120-19294] - Effects on autophagic activity & dendritic length of neurons exposed to supernatant from HIV-1-infected microglia in combination with morphine. (A) Representative images of neurons with the indicated treatments. Sup, supernatant from uninfected [HIV(-)] & HIV-1-infected [HIV(+)] microglia. Cells were immunolabeled with antibodies to the autophagic activity marker p62/SQSTM1 (red) & the neuronal cell-type-specific marker MAP2 (green). DAPI (blue) staining indicates cell nuclei. (B) Quantification of p62/SQSTM1 immunoreactivity from (A). Data are presented as the percentage of control cells which was set at 100; F (5,24) = 5.882, p = 0.0011; □p < 0.05 when compared to HIV(+)Sup + morphine treatment. (C) Western blotting analysis of p62/SQSTM1 & LAMP1 expression levels for the indicated treatments. GAPDH was used as a loading control. Blots are representative of three independent experiments. (D) Measurement of dendrite length from (A). F(5,24) = 26.15, p = < 0.0001; Φp < 0.05 when compared to morphine; Ψp < 0.05 when compared to HIV(-)Sup; Ωp < 0.05 when compared to HIV(-)Sup + morphine; #p < 0.05 when compared to HIV(+)Sup; & □p < 0.05 when compared to HIV(+)Sup + morphine treatment. Error bars show the SEM for five randomly selected fields totaling at least 100 cells from each group. Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/Article/10.3389/fmicb.2015.00653/abstract), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: LAMP-1/CD107a Antibody [NB120-19294] - NPC1 Disulfide bond-locked MLD & CTD fails to rescue cholesterol export from lysosomes.(A) Partial NPC1 structure; inset, close-up view of the MLD/CTD interface. The amino acid residues mutated to cysteines for disulfide bond formation are shown & highlighted in red. (B) Confocal immunofluorescence microscopy analysis of mouse NPC1-A521C/K1013C & LAMP1 proteins in HeLa cells (bar, 20 µm). White boxes in images indicate regions of cells enlarged in the insets shown at the lower right of each image. (C) Confocal immunofluorescence microscopy of cholesterol accumulation rescue for NPC1-A521C or mouse NPC1-A521C/K1013C. (D) Flow cytometry of the rescue experiment analyzed in (C). GFP-positive cells with similar expression levels were analyzed: 17746 NPC1-/- cells; 1315 NPC1 wild type; 1137 NPC1-A521C/K1013C cells; 837 NPC1-A521C cells; cell numbers were normalized for comparison.Extracted ion chromatograms from LC-MS analysis of proteolyzed A521C/K1013C NPC1.Protein was carbamidomethylated in the presence or absence of reducing agent prior to deglycosylation & proteolysis. In both samples, blue traces represent m/z = 596.2818 (corresponding to the NPC1 peptide APCSLNDTSLL carbamidomethylated at the engineered cysteine A521C & deamidated at the N524 glycosylation site). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32410728), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Sofia A, Pablo M, Steffen H et al. OMA1-mediated integrated stress response protects against ferroptosis in mitochondrial cardiomyopathy. Cell Metab. 2022-09-15 [PMID: 36113464]

Wang BJ, Chen YY, Chang HH et Al. Zinc oxide nanoparticles exacerbate skin epithelial cell damage by upregulating pro-inflammatory cytokines and exosome secretion in M1 macrophages following UVB irradiation-induced skin injury Part Fibre Toxicol 2024-02-28 [PMID: 38419076]

Stefan Norlin, Vishal S Parekh, Peter Naredi, Helena Edlund Asna1/TRC40 Controls β-Cell Function and Endoplasmic Reticulum Homeostasis by Ensuring Retrograde Transport. Diabetes 2016-04-28 [PMID: 26438609]

Jiyoung Jang, Hyun Jung Park, Wonyoung Seong, Jiyoon Kim, Chungho Kim Vimentin-mediated buffering of internal integrin β1 pool increases survival of cells from anoikis BMC Biology 2024-06-24 [PMID: 38915055]

Jaime M. Ross, Lars Olson, Giuseppe Coppotelli, Sofie Lautrup Mitochondrial Dysfunction and Protein Homeostasis in Aging: Insights from a Premature-Aging Mouse Model Biomolecules 2024-01-30 [PMID: 38397399]

Smith LJ, Bolsinger MM, Chau KY et al. The GBA variant E326K is associated with alpha-synuclein aggregation and lipid droplet accumulation in human cell lines Human Molecular Genetics 2023-02-19 [PMID: 36130205] (Western Blot, Block/Neutralize)

Belmonte-FernAndez A, Herrero-RuIz J, Galindo-Moreno M et al. Cisplatin-induced cell death increases the degradation of the MRE11-RAD50-NBS1 complex through the autophagy/lysosomal pathway Cell death and differentiation 2022-12-08 [PMID: 36477079] (WB, Human)

Guo L, Reed K, Carter A et al. Sleep-Disturbance-Induced Microglial Activation Involves CRH-Mediated Galectin 3 and Autophagy Dysregulation Cells 2022-12-30 [PMID: 36611953] (WB, Mouse)

Schifanella L, Anderson J, Wieking G et al. The Defenders of the Alveolus Succumb in COVID-19 Pneumonia to SARS-CoV-2, Necroptosis, Pyroptosis and Panoptosis bioRxiv : the preprint server for biology 2022-08-08 [PMID: 35982650] (ICC/IF, Human)

Sun Y, Wang X, Chen B et al. TFEB-Mediated Lysosomal Restoration Alleviates High Glucose-Induced Cataracts Via Attenuating Oxidative Stress Investigative ophthalmology & visual science 2022-06-01 [PMID: 35758908] (WB, IHC-P, Rabbit, Rat)

Scales, S J, Gupta, N Et al. Apolipoprotein L1-Specific Antibodies Detect Endogenous APOL1 inside the Endoplasmic Reticulum and on the Plasma Membrane of Podocytes. J Am Soc Nephrol 2020-09-01 [PMID: 32764142] (IF/IHC, Mouse)

Cheng Y, Kim WK, Wellman LL Et al. Short-Term Sleep Fragmentation Dysregulates Autophagy in a Brain Region-Specific Manner Life (Basel, Switzerland) 2021-10-16 [PMID: 34685469] (Mouse)

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