

Product Datasheet

LAMP-1/CD107a Antibody (5H6) - BSA Free NBP2-25154

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NBP2-25154**LAMP-1/CD107a Antibody (5H6) - BSA Free**

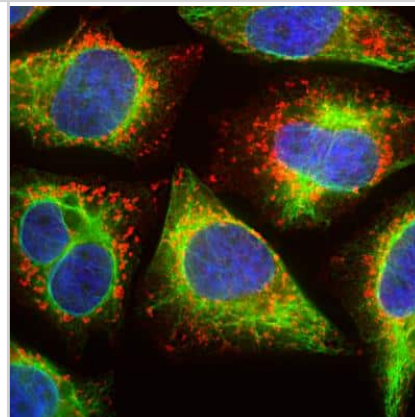
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	5H6
Preservative	5mM Sodium Azide
Isotype	IgG1
Purity	Immunogen affinity purified
Buffer	PBS, 50% glycerol
Target Molecular Weight	90-120 kDa

Product Description	
Description	Novus Biologicals Mouse LAMP-1/CD107a Antibody (5H6) - BSA Free (NBP2-25154) is a monoclonal antibody validated for use in IHC, WB and ICC/IF. Anti-LAMP-1/CD107a Antibody: Cited in 4 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	3916
Gene Symbol	LAMP1
Species	Human, Mouse
Reactivity Notes	Human Specific. Mouse reactivity reported in scientific literature (PMID: 29789598).
Marker	Late Endosome Marker
Immunogen	Amino acids 32-350 of the human LAMP1 precursor sequence. [UniProt# P11279]

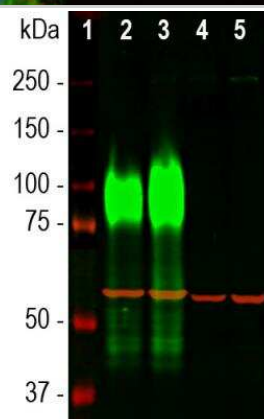
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:1000-1:10000, Immunohistochemistry 1:2000, Immunocytochemistry/ Immunofluorescence 1:2000
Application Notes	This LAMP1 (5H6) antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry, and Western Blot, where a band can be seen at ~90-120 kDa.

Images

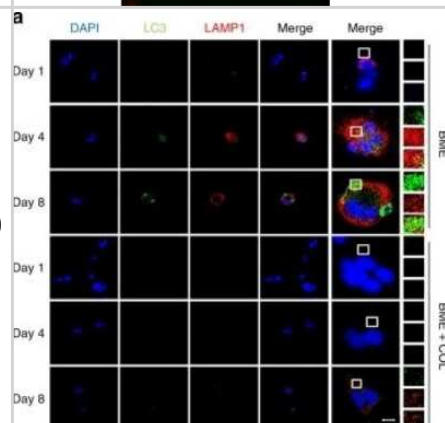
Immunocytochemistry/Immunofluorescence: LAMP-1/CD107a Antibody (5H6) [NBP2-25154] - Analysis of HeLa cells stained with mouse LAMP-1/CD107a mAb, dilution 1:500 (Red), and costained with chicken Vimentin pAb, dilution 1:10000, (Green). DAPI staining of nuclear DNA (Blue). The cells were treated with 50uM of chloroquine, an inhibitor of autophagy, for 16hrs prior to staining. The LAMP-1/CD107a antibody reveals vesicular staining of LAMP1 protein accumulated in swollen lysosomes, while the Vimentin antibody specifically labels the intermediate filament network in these cells.



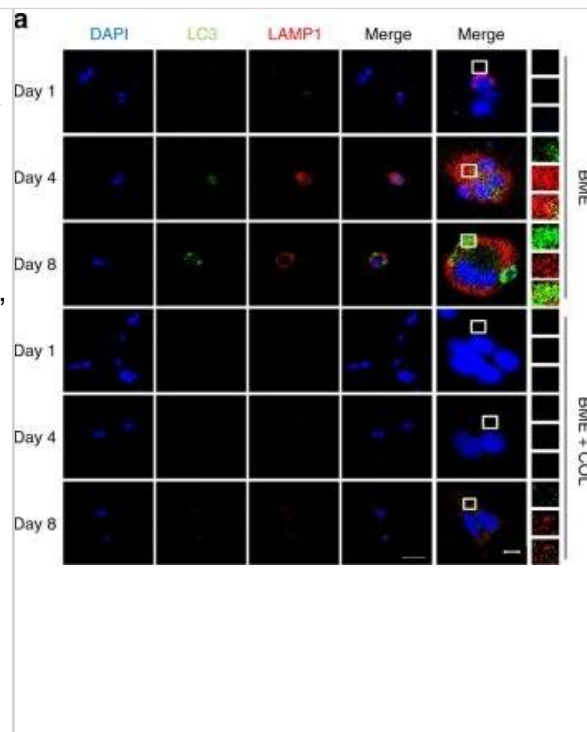
Western Blot: LAMP-1/CD107a Antibody (5H6) [NBP2-25154] - Analysis of different cell lysates using mouse mAb to LAMP1, NBP2-25154 dilution 1:10,000 in green. Cells were maintained under normal conditions (Ct), or treated with 50uM of chloroquine (CQ), an inhibitor of autophagy, for 24 hours: [1] protein standard (red), [2] HeLa Ct, [3] HeLa +CQ, [4] NIH-3T3 Ct, and [5] NIH-3T3+CQ. The smeared band between 75-120kDa corresponds to variably glycosylated forms of the LAMP1 protein detected only in the human cells, this antibody fails to recognize the rodent homologue. The same blot was probed with chicken pAb to HSP60, dilution 1:20,000. The HSP60 antibody reveals heat shock 60 protein with apparent molecular weight of 60kDa in all preparations.



Immunocytochemistry/Immunofluorescence: LAMP-1/CD107a Antibody (5H6) [NBP2-25154] - D2.0 R cells activate autophagy upon entering a dormant state. Representative images are shown for immunofluorescent staining of lysosomal (LAMP-1/CD107a, red) and autophagic (LC3, green) markers of D2.0 R cells in BME (upper panels) and BME + COL1 (lower panels). Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41467-018-04070-6>), licensed under a CC-BY license.



D2.0 R cells activate autophagy upon entering a dormant state. Representative images are shown for a Immunofluorescent staining of lysosomal (LAMP1, red) and autophagic (LC3, green) markers of D2.0 R cells in BME (upper panels) and BME + COL1 (lower panels) with b Quantification of the percentage of cells exhibiting LC3 positive puncta and LAMP1 staining out of the total number of cells analysed (mean \pm s.e.m, $n = 30\text{--}42$ cells. Comparisons are relative to Day 1 by Kruskal–Wallis, Dunn’s post test. $*P \leq 0.05$; $****P \leq 0.0001$) and the average number of LC3 puncta per cell (Comparisons by Kruskal–Wallis, Dunn’s post test. $**P \leq 0.01$ and $****P \leq 0.0001$). c D2.0 R cells transfected with the mCherry-GFP-LC3 reporter show activation and completion of the autophagic cycle (red fluorescence only) when plated in BME matrices for 8 days. d The graphs represent the percentage of cells with double-positive puncta (mCherry+ and GFP+) (autophagosomes) out of the total number of cells analysed (left graph) (mean \pm s.e.m, $n = 35\text{--}39$ cells). Comparisons by Kruskal–Wallis, Dunn’s post test. $****P \leq 0.0001$) and the rate of conversion from cells exhibiting yellow puncta to red-only puncta expressed as fold change (right graph). Scale bars are 50 and 10 μm for a and 20 and 10 μm for b Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/29789598>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Niskanen J, Peltonen S, Ohtonen S et al. Uptake of alpha-synuclein preformed fibrils is suppressed by inflammation and induces an aberrant phenotype in human microglia. *Glia* 2024-10-22 [PMID: 39435593]

Lampinen, R, R Mitochondrial dysfunction in non-neuronal cells in Alzheimer's disease Thesis 2022-01-01

Jiang W, Liu F, Li H et al. TREM2 ameliorates anesthesia and surgery-induced cognitive impairment by regulating mitophagy and NLRP3 inflammasome in aged C57/BL6 mice *Neurotoxicology* [PMID: 35447280] (IHC-P, Mouse)

Sozen E, Demirel-Yalciner T, Sari D Et al. Deficiency of SREBP1c modulates autophagy mediated lipid droplet catabolism during oleic acid induced steatosis *Metabolism open* 2021-12-01 [PMID: 34704008] (ICC/IF, Mouse)

Keatinge M, Gegg ME, Watson L et al. Acid sphingomyelinase inhibition results in profound rescue of neuronal function in glucocerebrosidase deficiency unexpected opposing effects of Parkinson disease risk genes *bioRxiv* 2020-01-01 (Zebrafish)

Vera-Ramirez L, Vodnala SK, Nini R et al. Autophagy promotes the survival of dormant breast cancer cells and metastatic tumour recurrence *Nat Commun* 2018-05-22 [PMID: 29789598] (ICC/IF, Mouse)



Novus Biologicals USA

10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada

21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd

19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information

www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NBP2-25154

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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