BOSTER BIOLOGICAL TECHNOLOGY
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Anti-LAMP1 Antibody Picoband®

Catalog Number: PA1822

About LAMP1

LAMP1 (lysosomal-associated membrane protein 1) also called LAMPA, LGP120 or CD107A, is a member of a family of membrane glycoproteins. This glycoprotein provides selectins with carbohydrate ligands. It may also play a role in tumor cell metastasis. CD107a has also been shown to be a marker of degranulation on lymphocytes such as CD8+ and NK cells. By means of in situ hybridization, Mattei et al. (1990) assigned the LAMP1 gene to chromosome 13q34. A related gene, which may be a pseudogene, mapped to chromosome 12p13.3. Hybridization of LAMP1 cDNA to chromosome 12p13.3 was observed even when probes representing different portions of the LAMP1 cDNA were used.

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Overview

Product Name	Anti-LAMP1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-LAMP1 Antibody catalog # PA1822. Tested in WB, IHC applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P11279

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human LAMP1, different from the related mouse and rat sequences by one amino acid.

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Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human

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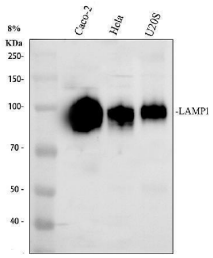
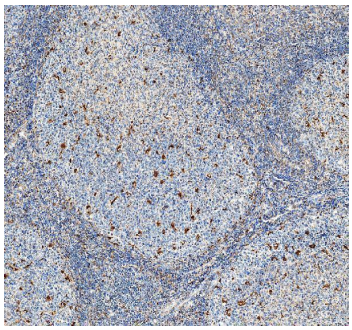
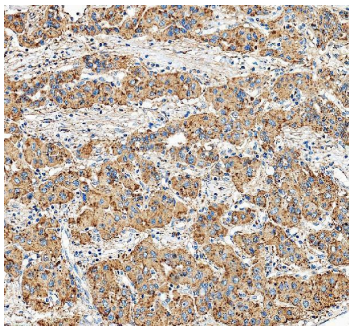
Anti-LAMP1 Antibody Picoband® (PA1822) Images



Western blot analysis of LAMP1 using anti-LAMP1 antibody (PA1822). Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Caco-2 whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human U2OS whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-LAMP1 antigen affinity purified polyclonal antibody (PA1822) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for LAMP1 at approximately 95-120 kDa. The expected band size for LAMP1 is at 45 kDa.



IHC analysis of LAMP1 using anti-LAMP1 antibody (PA1822). LAMP1 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-LAMP1 Antibody (PA1822) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of LAMP1 using anti-LAMP1 antibody (PA1822). LAMP1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-LAMP1 Antibody (PA1822) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

SGJ increased the concentration of H + in lysosomes, and up-regulated LAMP1 and LAMP2 protein level. a Acridine orange staining for young (PDL 5) and senescent (PDL 20) BMSCs. Acidic vacuoles declined with age as shown in the

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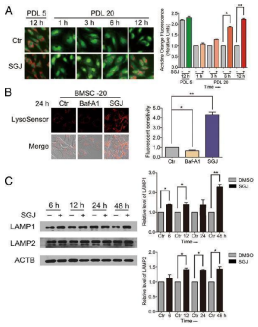

results. Twenty-micromolar SGJ treatments for 1, 3, 6, and 12 h significantly restored the amount of acidic vacuoles (magnification × 200). b SGJ promoted lysosomal acidification. Lysosensor™ Green DND-189 was used to sense the changes of the concentration of H + in lysosomes, and quantification. BMSCs were treated with 20 nM Baf-A1 or 20 uM SGJ for 24 h. The changes of the red fluorescence reflect changes in lysosomal pH. c Western blot analysis of LAMP1 and LAMP2 protein levels with beta-actin as a loading control, and quantification. BMSCs were treated with 20 uM SGJ for 6, 12, 24 and 48 h. (*, $p < 0.05$; **, $p < 0.01$, results were expressed as means ± SEM, n = 3) Index in PubMed under a CC BY license. PMID: 30526663

1 Publications Citing This Product

1. PubMed ID: 33203874, Ma WQ,Sun XJ,Zhu Y,Liu NF. PDK4 promotes vascular calcification by interfering with autophagic activity and metabolic reprogramming. Cell Death Dis.2020 Nov 17;11(11):991.doi:10.1038/s41419-020-03162-w. PMID:33203874;PMCID:PMC7673024.

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Anti-LAMP1 Antibody

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