SANTA CRUZ BIOTECHNOLOGY, INC.

LIMP II (D-4): sc-55571

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lysosomes are intracytoplasmic organelles that are found within leukocytes (granulocytes, neutrophils, basophils and eosinophils) and function as storage granules for small particles. Lysosomes actively support subcellular protein degradation mechanisms through fusion with cellular organelles such as phagocytic vacuoles and the plasma membrane. Lysosome fusion to the plasma membrane, known as exocytosis, releases the contents of the vesicle into the extracellular environment. The lysosomal integral membrane proteins I-III, known as LIMP-I, LIMP-II and LIMP-III, localize from the *trans*-Golgi network to lysosomes via an AP-3-dependent pathway that may involve AP-1 and Clathrin. LIMP I-III are protein markers for the lysosome organelle. These markers are exceptionally useful for microscopy studies, cellular fractionation validation and studies pertaining to protein trafficking through the secretory pathway.

REFERENCES

1. Vega, M.A., et al. 1991. Targeting of lysosomal integral membrane protein LIMP II. The tyrosine-lacking carboxyl cytoplasmic tail of LIMP II is sufficient for direct targeting to lysosomes. J. Biol. Chem. 266: 16269-16272.
2. McIntyre, G.F., et al. 1993. The lysosomal proenzyme receptor that binds procathepsin L to microsomal membranes at pH 5 is a 43 kDa integral membrane protein. Proc. Natl. Acad. Sci. USA 90: 10588-10592.
3. Honing, S., et al. 1996. The tyrosine-based lysosomal targeting signal in LAMP-1 mediates sorting into Golgi-derived clathrin-coated vesicles. EMBO J. 15: 5230-5239.

CHROMOSOMAL LOCATION

Genetic locus: SCARB2 (human) mapping to 4q21.1; Scarb2 (mouse) mapping to 5 E2.

SOURCE

LIMP II (D-4) is a mouse monoclonal antibody raised against amino acids 249-478 mapping at the C-terminus of LIMP II of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIMP II (D-4) is available conjugated to agarose (sc-55571 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55571 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55571 PE), fluorescein (sc-55571 FITC), Alexa Fluor® 488 (sc-55571 AF488), Alexa Fluor® 546 (sc-55571 AF546), Alexa Fluor® 594 (sc-55571 AF594) or Alexa Fluor® 647 (sc-55571 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55571 AF680) or Alexa Fluor® 790 (sc-55571 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

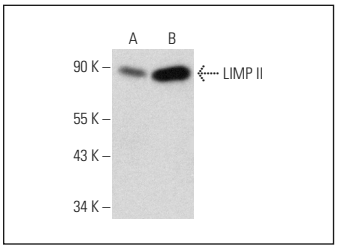
LIMP II (D-4) is recommended for detection of LIMP II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LIMP II siRNA (h): sc-41546, LIMP II siRNA (m): sc-41547, LIMP II shRNA Plasmid (h): sc-41546-SH, LIMP II shRNA Plasmid (m): sc-41547-SH, LIMP II shRNA (h) Lentiviral Particles: sc-41546-V and LIMP II shRNA (m) Lentiviral Particles: sc-41547-V.

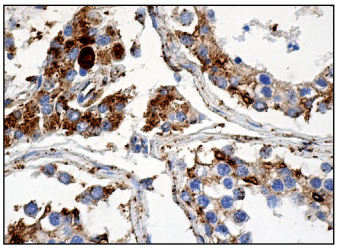
Molecular Weight of LIMP II: 72 kDa.

Positive Controls: Y79 cell lysate: sc-2240, NCI-H292 whole cell lysate: sc-364179 or mouse eye extract: sc-364241.

DATA



LIMP II (D-4): sc-55571. Western blot analysis of LIMP II expression in Y79 (**A**) and NCI-H292 (**B**) whole cell lysates.



LIMP II (D-4): sc-55571. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Armstrong, A., et al. 2014. Lysosomal network proteins as potential novel CSF biomarkers for Alzheimer's disease. Neuromolecular Med. 16: 150-160.
2. Jiao, X.Y., et al. 2014. Distribution of EV71 receptors SCARB2 and PSGL-1 in human tissues. Virus Res. 190: 40-52.
3. Jian, J., et al. 2016. Progranulin recruits HSP70 to β-glucocerebrosidase and is therapeutic against gaucher disease. EBioMedicine 13: 212-224.
4. Teixeira, G.R., et al. 2020. Physical resistance training-induced changes in lipids metabolism pathways and apoptosis in prostate. Lipids Health Dis. 19: 14.
5. Teixeira, G.R., et al. 2021. Strength training protects against prostate injury in alcoholic rats. J. Cell. Physiol. 236: 3675-3687.
6. Zhao, X., et al. 2021. Progranulin associates with Rab2 and is involved in autophagosome-lysosome fusion in Gaucher disease. J. Mol. Med. E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures.