

# LIMP III (5A-9): sc-21725

## 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

- 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.
- McIntyre, G.F. and Erickson, A.H. 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.
- 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.
- Crombie, R. and Silverstein, R. 1998. Lysosomal integral membrane protein II binds thrombospondin-1. Structure-function homology with the cell adhesion molecule CD36 defines a conserved recognition motif. *J. Biol. Chem.* 273: 4855-4863.
- Le Borgne, R., et al. 1998. The mammalian AP-3 adaptor-like complex mediates the intracellular transport of lysosomal membrane glycoproteins. *J. Biol. Chem.* 273: 29451-29461.

## SOURCE

LIMP III (5A-9) is a mouse monoclonal antibody raised against purified cellular fractions from rat liver.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIMP III (5A-9) is available conjugated to agarose (sc-21725 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-21725 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21725 PE), fluorescein (sc-21725 FITC), Alexa Fluor® 488 (sc-21725 AF488), Alexa Fluor® 546 (sc-21725 AF546), Alexa Fluor® 594 (sc-21725 AF594) or Alexa Fluor® 647 (sc-21725 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-21725 AF680) or Alexa Fluor® 790 (sc-21725 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

LIMP III (5A-9) is recommended for detection of LIMP III of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

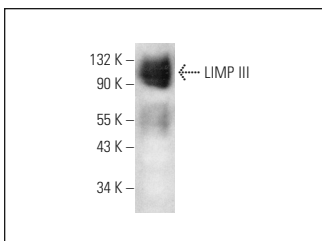
Molecular Weight of LIMP III: 90 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



LIMP III (5A-9): sc-21725. Western blot analysis of LIMP III expression in KNRK whole cell lysate.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.