SANTA CRUZ BIOTECHNOLOGY, INC.

LIP5 (D-6): sc-374012

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The Power to Question

BACKGROUND

LIP5 (LYST-interacting protein 5), also known as VTA1 (Vps20-associated 1 homolog), DRG1 (dopamine-responsive protein DRG-1), SBP1 (SKD1 binding protein 1) or My012, is a 307 amino acid protein belonging to the VTA1 family. LIP5 plays a role in sorting membrane proteins, including lysosomal enzymes, lipids and stimulated growth factor receptors, for lysosomal degradation in a pathway known as the endosomal multivesicular bodies (MVB) pathway. Found in brain, liver, heart and kidney, LIP5 localizes to cytoplasm and both endosomal and peripheral membranes. RNAi studies demonstrate that LIP5 depletion decreases human immunodeficiency virus type 1 (HIV-1) budding, and LIP5 is known to interact with CHMP1B, CHMP2A, CHMP5, VPS4B, KIAA0174 (IST1) and possibly CHMP3.

REFERENCES

1. Shi, J., et al. 2001. Identification of dopamine responsive mRNAs in glial cells by suppression subtractive hybridization. Brain Res. 910: 29-37.
2. Fujita, H., et al. 2004. Mammalian class E Vps proteins, SBP1 and mVps2/CHMP2A, interact with and regulate the function of an AAA-ATPase SKD1/Vps4B. J. Cell Sci. 117: 2997-3009.
3. Ward, D.M., et al. 2005. The role of LIP5 and CHMP5 in multivesicular body formation and HIV-1 budding in mammalian cells. J. Biol. Chem. 280: 10548-10555.
4. Welsch, S., et al. 2006. Ultrastructural analysis of ESCRT proteins suggests a role for endosome-associated tubular-vesicular membranes in ESCRT function. Traffic 7: 1551-1566.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610902. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: VTA1 (human) mapping to 6q24.1; Vta1 (mouse) mapping to 10 A2.

SOURCE

LIP5 (D-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of LIP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIP5 (D-6) is available conjugated to agarose (sc-374012 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374012 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374012 PE), fluorescein (sc-374012 FITC), Alexa Fluor® 488 (sc-374012 AF488), Alexa Fluor® 546 (sc-374012 AF546), Alexa Fluor® 594 (sc-374012 AF594) or Alexa Fluor® 647 (sc-374012 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374012 AF680) or Alexa Fluor® 790 (sc-374012 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LIP5 (D-6) is recommended for detection of LIP5 of human origin and Vta1 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LIP5 siRNA (h): sc-95648, Vta1 siRNA (m): sc-155235, LIP5 shRNA Plasmid (h): sc-95648-SH, Vta1 shRNA Plasmid (m): sc-155235-SH, LIP5 shRNA (h) Lentiviral Particles: sc-95648-V and Vta1 shRNA (m) Lentiviral Particles: sc-155235-V.

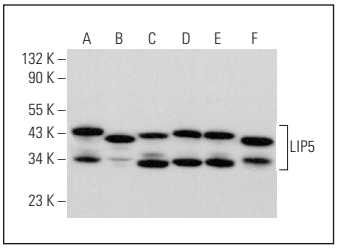
Molecular Weight of LIP5: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, c4 whole cell lysate: sc-364186 or RAW 264.7 whole cell lysate: sc-2211.

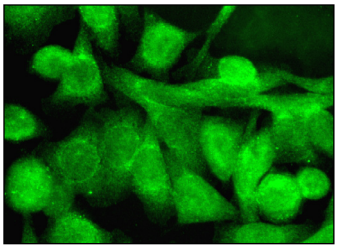
RECOMMENDED SUPPORT REAGENTS

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



LIP5 (D-6): sc-374012. Western blot analysis of LIP5 expression in c4 (**A**), HeLa (**B**), NIH/3T3 (**C**), RAW 264.7 (**D**), WEHI-231 (**E**) and C6 (**F**) whole cell lysates.



LIP5 (D-6): sc-374012. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization.

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 for detailed protocols and support products.