

VPS35 (B-5): sc-374372



The Power to Question

BACKGROUND

Vacuolar sorting proteins (VPSs) are required for proper trafficking of endocytic and biosynthetic proteins to the vacuole and play an important role in the budding process of cells. VPS35 (vacuolar protein sorting 35), also known as MEM3, is the 796 amino acid human homolog of the *S. cerevisiae* VPS35 protein. Localized to the cytoplasm and to the peripheral membrane, VPS35 is an essential component of the retromer complex, which is involved in retrieval of lysosomal enzyme receptors from endosomes to the *trans*-Golgi network. VPS35 is expressed ubiquitously with highest expression in heart, placenta, brain, testes, kidney, colon, ovary and spleen. In addition to its crucial role in the retromer complex, VPS35 is part of a subcomplex that is required to regulate transcytosis of the polymeric immunoglobulin receptor from the basolateral to the apical surface of epithelial cells and hepatocytes.

CHROMOSOMAL LOCATION

Genetic locus: VPS35 (human) mapping to 16q11.2; Vps35 (mouse) mapping to 8 C3.

SOURCE

VPS35 (B-5) is a mouse monoclonal antibody raised against amino acids 497-796 mapping at the C-terminus of VPS35 of human origin.

PRODUCT

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

VPS35 (B-5) is available conjugated to agarose (sc-374372 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374372 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374372 PE), fluorescein (sc-374372 FITC), Alexa Fluor® 488 (sc-374372 AF488), Alexa Fluor® 546 (sc-374372 AF546), Alexa Fluor® 594 (sc-374372 AF594) or Alexa Fluor® 647 (sc-374372 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374372 AF680) or Alexa Fluor® 790 (sc-374372 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VPS35 (B-5) is recommended for detection of VPS35 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).

VPS35 (B-5) is also recommended for detection of VPS35 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VPS35 siRNA (h): sc-63218, VPS35 siRNA (m): sc-63219, VPS35 shRNA Plasmid (h): sc-63218-SH, VPS35 shRNA Plasmid (m): sc-63219-SH, VPS35 shRNA (h) Lentiviral Particles: sc-63218-V and VPS35 shRNA (m) Lentiviral Particles: sc-63219-V.

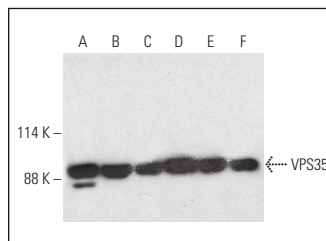
Molecular Weight of VPS35: 90 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233 or Ramos cell lysate: sc-2216.

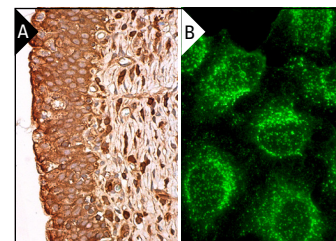
STORAGE

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

DATA



VPS35 (B-5) HRP: sc-374372 HRP. Direct western blot analysis of VPS35 expression in MOLT-4 (A), Jurkat (B), Ramos (C), WEHI-231 (D), 3T3-L1 (E) and AMJ2-C8 (F) whole cell lysates.



VPS35 (B-5): sc-374372. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Helfer, E., et al. 2013. Endosomal recruitment of the WASH complex: active sequences and mutations impairing interaction with the retromer. *Biol. Cell* 105: 191-207.
- Zavodszky, E., et al. 2014. Mutation in VPS35 associated with Parkinson's disease impairs WASH complex association and inhibits autophagy. *Nat. Commun.* 5: 3828.
- Moreau, K., et al. 2015. Transcriptional regulation of Annexin A2 promotes starvation-induced autophagy. *Nat. Commun.* 6: 8045.
- Ishizu, N., et al. 2016. Impaired striatal dopamine release in homozygous VPS35 D620N knock-in mice. *Hum. Mol. Genet.* 25: 4507-4517.
- Kim, M.J., et al. 2017. The Parkinson's disease-linked protein TMEM230 is required for Rab8a-mediated secretory vesicle trafficking and retromer trafficking. *Hum. Mol. Genet.* 26: 729-741.
- Mukadam, A.S., et al. 2018. Analysis of novel endosome-to-Golgi retrieval genes reveals a role for PLD3 in regulating endosomal protein sorting and amyloid precursor protein processing. *Cell. Mol. Life Sci.* 75: 2613-2625.
- Zhang, H.X., et al. 2018. TRIM27 mediates STAT3 activation at retromer-positive structures to promote colitis and colitis-associated carcinogenesis. *Nat. Commun.* 9: 3441.
- Seaman, M.N.J., et al. 2018. Inhibition of TBC1D5 activates Rab7a and can enhance the function of the retromer cargo-selective complex. *J. Cell Sci.* 131: jcs217398.
- Patrick, K.L., et al. 2018. Quantitative yeast genetic interaction profiling of bacterial effector proteins uncovers a role for the human retromer in salmonella infection. *Cell Syst.* 7: 323-338.e6.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA