

# VPS33B (G-9): sc-398322

## 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. VPS33B (vacuolar protein sorting 33 homolog B) is a 617 amino acid protein that localizes to the cytoplasmic side of the peripheral membrane, as well as to the late endosomal membrane, and belongs to the STXBP/SEC1 family. Expressed ubiquitously with highest expression in testis and lowest expression in lung, VPS33B is thought to play a role in vesicle-mediated protein trafficking to lysosomal compartments and may also be involved in membrane docking events at late endosomes. Defects in the gene encoding VPS33B are the cause of arthrogyroposis-renal dysfunction-cholestasis syndrome (ARC), an autosomal recessive disorder that is characterized by renal tubular dysfunction, neurogenic arthrogyroposis multiplex congenita and neonatal cholestasis with bile duct hypoplasia.

## REFERENCES

1. Carim, L., et al. 2000. Cloning, mapping and expression analysis of VPS33B, the human orthologue of rat Vps33b. *Cytogenet. Cell Genet.* 89: 92-95.
2. Huizing, M., et al. 2001. Molecular cloning and characterization of human VPS18, VPS 11, VPS16, and VPS33. *Gene* 264: 241-247.
3. Gissen, P., et al. 2004. Mutations in VPS33B, encoding a regulator of SNARE-dependent membrane fusion, cause arthrogyroposis-renal dysfunction-cholestasis (ARC) syndrome. *Nat. Genet.* 36: 400-404.

## CHROMOSOMAL LOCATION

Genetic locus: VPS33B (human) mapping to 15q26.1; Vps33b (mouse) mapping to 7 D3.

## SOURCE

VPS33B (G-9) is a mouse monoclonal antibody raised against amino acids 271-570 mapping near the C-terminus of VPS33B of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VPS33B (G-9) is available conjugated to agarose (sc-398322 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398322 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398322 PE), fluorescein (sc-398322 FITC), Alexa Fluor® 488 (sc-398322 AF488), Alexa Fluor® 546 (sc-398322 AF546), Alexa Fluor® 594 (sc-398322 AF594) or Alexa Fluor® 647 (sc-398322 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398322 AF680) or Alexa Fluor® 790 (sc-398322 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

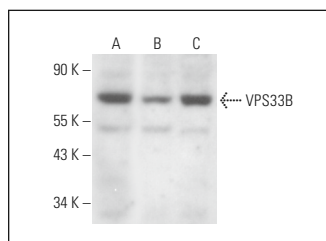
VPS33B (G-9) is recommended for detection of VPS33B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VPS33B siRNA (h): sc-76905, VPS33B siRNA (m): sc-76906, VPS33B shRNA Plasmid (h): sc-76905-SH, VPS33B shRNA Plasmid (m): sc-76906-SH, VPS33B shRNA (h) Lentiviral Particles: sc-76905-V and VPS33B shRNA (m) Lentiviral Particles: sc-76906-V.

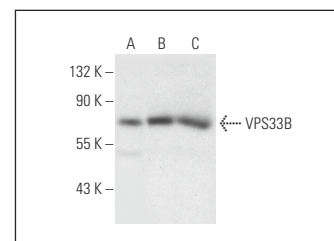
Molecular Weight of VPS33B: 71 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

## DATA



VPS33B (G-9): sc-398322. Western blot analysis of VPS33B expression in Hep G2 (A), BYDP (B) and RAW 264.7 (C) whole cell lysates.



VPS33B (G-9): sc-398322. Western blot analysis of VPS33B expression in A-431 (A), HeLa (B) and Hep G2 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Dai, J., et al. 2016. VPS33B regulates Vwf-positive vesicular trafficking in megakaryocytes. *J. Pathol.* 240: 108-119.
2. Hunter, M.R., et al. 2018. Proteomic and biochemical comparison of the cellular interaction partners of human VPS33A and VPS33B. *J. Mol. Biol.* 430: 2153-2163.
3. Chang, J., et al. 2020. Circadian control of the secretory pathway maintains collagen homeostasis. *Nat. Cell Biol.* 22: 74-86.
4. Ma, J., et al. 2021. VPS33B in dendritic cells regulates house dust mite-induced allergic lung inflammation. *J. Immunol.* 207: 2649-2659.
5. Satomura, Y., et al. 2022. Novel gene mutations in three Japanese patients with ARC syndrome associated mild phenotypes: a case series. *J. Med. Case Rep.* 16: 60.
6. Xiang, H., et al. 2022. VPS33B controls Treg cell suppressive function through inhibiting lysosomal nutrient sensing complex-mediated mTORC1 activation. *Cell Rep.* 39: 110943.

## RESEARCH USE

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