SANTA CRUZ BIOTECHNOLOGY, INC.

VPS29 (D-1): sc-398874

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. VPS29 (vacuolar protein sorting 29 homolog), also known as DC7, DC15 or PEP11, is a 182 amino acid peripheral membrane protein that localizes to both the cytoplasm and to the endosomal membrane and exists as a component of a large multimeric retromer complex. VPS29 is expressed at high levels in heart, lung, placenta, spleen, peripheral blood leukocytes, thymus, colon skeletal muscle, kidney and brain, where it plays an important role in retrograde transport of proteins from endosomes to the *trans*-Golgi network. Multiple isoforms of VPS29 exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: VPS29 (human) mapping to 12q24.11; Vps29 (mouse) mapping to 5 F.

SOURCE

VPS29 (D-1) is a mouse monoclonal antibody raised against amino acids 1-179 mapping at the N-terminus of VPS29 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.

VPS29 (D-1) is available conjugated to agarose (sc-398874 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398874 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398874 PE), fluorescein (sc-398874 FITC), Alexa Fluor® 488 (sc-398874 AF488), Alexa Fluor® 546 (sc-398874 AF546), Alexa Fluor® 594 (sc-398874 AF594) or Alexa Fluor® 647 (sc-398874 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398874 AF680) or Alexa Fluor® 790 (sc-398874 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

VPS29 (D-1) is recommended for detection of VPS29 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 VPS29 siRNA (h): sc-76903, VPS29 siRNA (m): sc-76904, VPS29 shRNA Plasmid (h): sc-76903-SH, VPS29 shRNA Plasmid (m): sc-76904-SH, VPS29 shRNA (h) Lentiviral Particles: sc-76903-V and VPS29 shRNA (m) Lentiviral Particles: sc-76904-V.

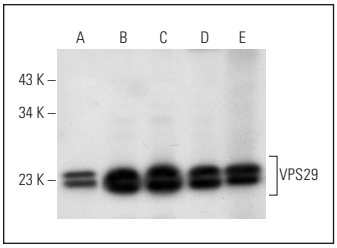
Molecular Weight of VPS29: 20 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, JAR cell lysate: sc-2276 or human spleen extract: sc-363779.

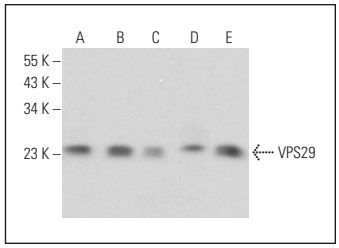
RECOMMENDED SUPPORT REAGENTS

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



VPS29 (D-1): sc-398874. Western blot analysis of VPS29 expression in WI-38 (**A**), JAR (**B**), ACHN (**C**) and Hep G2 (**D**) whole cell lysates and human spleen tissue extract (**E**).



VPS29 (D-1): sc-398874. Western blot analysis of VPS29 expression in RT-4 (**A**), PC-3 (**B**), Neuro-2A (**C**), KNRK (**D**) and C6 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2017. Cellular interactome analysis of vaccinia virus K7 protein identifies three transport machineries as binding partners for K7. Virus Genes 53: 814-822.
2. Siddiqa, A., et al. 2018. Human papillomavirus 16 infection induces VAP-dependent endosomal tubulation. J. Virol. 92: e01514-17.
3. Kato, K., et al. 2020. Biallelic VPS35L pathogenic variants cause 3C/Ritscher-Schinzel-like syndrome through dysfunction of retriever complex. J. Med. Genet. 57: 245-253.
4. Zhao, Y., et al. 2021. Expression of low level of VPS35-mCherry fusion protein diminishes VPS35 depletion induced neuron terminal differentiation deficits and neurodegenerative pathology, and prevents neonatal death. Int. J. Mol. Sci. 22: 8394.
5. Chae, C.W., et al. 2022. High glucose-mediated VPS26a down-regulation dysregulates neuronal amyloid precursor protein processing and Tau phosphorylation. Br. J. Pharmacol. 179: 3934-3950.
6. Hegazy, M., et al. 2022. Epidermal stratification requires retromer-mediated desmoglein-1 recycling. Dev. Cell 57: 2683-2698.e8.
7. Pei, Y., et al. 2023. RAB21 controls autophagy and cellular energy homeostasis by regulating retromer-mediated recycling of SLC2A1/GLUT1. Autophagy 19: 1070-1086.

RESEARCH USE

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

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