

VPS53 (H-4): sc-514920

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. VPS53 (vacuolar protein sorting 53), also known as PP13624 or HCCS1, is a 699 amino acid protein that localizes to both the Golgi apparatus and the endosome membrane and belongs to the VPS family. Expressed as multiple alternatively spliced isoforms, VPS53 functions as a component of the multi-protein Golgi-associated retrograde protein (GARP) complex and is thought to be involved in retrograde transport of early and late endosomes to the Golgi. The gene encoding VPS53 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Zhao, X., et al. 2003. The minimum LOH region defined on chromosome 17p13.3 in human hepatocellular carcinoma with gene content analysis. *Cancer Lett.* 190: 221-232.
2. Liewen, H., et al. 2005. Characterization of the human GARP (Golgi associated retrograde protein) complex. *Exp. Cell Res.* 306: 24-34.
3. Oka, T. and Krieger, M. 2005. Multi-component protein complexes and Golgi membrane trafficking. *J. Biochem.* 137: 109-114.
4. Zhu, J.D., et al. 2006. Transcription of the putative tumor suppressor gene HCCS1 requires binding of ETS-2 to its consensus near the transcription start site. *Cell Res.* 16: 780-796.
5. Ko, J.K., et al. 2007. The tail-anchoring domain of Bfl1 and HCCS1 targets mitochondrial membrane permeability to induce apoptosis. *J. Cell Sci.* 120: 2912-2923.

CHROMOSOMAL LOCATION

Genetic locus: VPS53 (human) mapping to 17p13.3; Vps53 (mouse) mapping to 11 B5.

SOURCE

VPS53 (H-4) is a mouse monoclonal antibody raised against amino acids 170-343 mapping within an internal region of VPS53 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VPS53 (H-4) is available conjugated to agarose (sc-514920 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514920 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514920 PE), fluorescein (sc-514920 FITC), Alexa Fluor® 488 (sc-514920 AF488), Alexa Fluor® 546 (sc-514920 AF546), Alexa Fluor® 594 (sc-514920 AF594) or Alexa Fluor® 647 (sc-514920 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514920 AF680) or Alexa Fluor® 790 (sc-514920 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

VPS53 (H-4) is recommended for detection of VPS53 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 VPS53 siRNA (h): sc-93834, VPS53 siRNA (m): sc-155222, VPS53 shRNA Plasmid (h): sc-93834-SH, VPS53 shRNA Plasmid (m): sc-155222-SH, VPS53 shRNA (h) Lentiviral Particles: sc-93834-V and VPS53 shRNA (m) Lentiviral Particles: sc-155222-V.

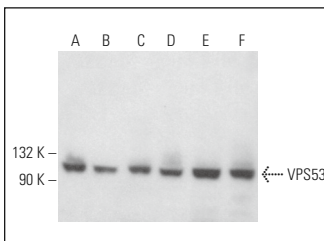
Molecular Weight of VPS53 isoforms: 80/76/94 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or JAR cell lysate: sc-2276.

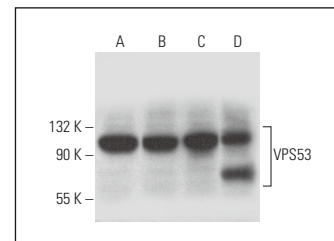
RECOMMENDED SUPPORT REAGENTS

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



VPS53 (H-4): sc-514920. Western blot analysis of VPS53 expression in HeLa (A), A549 (B), PC-3 (C), Neuro-2A (D), 3T3-L1 (E) and KNRK (F) whole cell lysates.



VPS53 (H-4): sc-514920. Western blot analysis of VPS53 expression in HeLa (A), JAR (B) and MCF7 (C) whole cell lysates and human liver tissue extract (D).

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.