

VPS54 (C-16): sc-109145

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. VPS54 (vacuolar protein sorting 54), also known as HCC8, SLP-8p or VPS54L, is a 977 amino acid protein that localizes to the Golgi apparatus and belongs to the VPS family. Expressed as multiple alternatively spliced isoforms, VPS54 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 VPS54 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Fuchs, S., et al. 2002. Comparative transcription map of the wobbler critical region on mouse chromosome 11 and the homologous region on human chromosome 2p13-14. *BMC Genet.* 3: 14.
2. Walter, L., et al. 2002. Identification, characterization and cytogenetic mapping of a yeast Vps54 homolog in rat and mouse. *Gene* 285: 213-220.
3. Liewen, H., et al. 2005. Characterization of the human GARP (Golgi associated retrograde protein) complex. *Exp. Cell Res.* 306: 24-34.
4. Oka, T. and Krieger, M. 2005. Multi-component protein complexes and Golgi membrane trafficking. *J. Biochem.* 137: 109-114.
5. Meisler, M.H., et al. 2008. Evaluation of the Golgi trafficking protein VPS54 (wobbler) as a candidate for ALS. *Amyotroph Lateral Scler.* 9: 141-148.

CHROMOSOMAL LOCATION

Genetic locus: VPS54 (human) mapping to 2p14; Vps54 (mouse) mapping to 11 A3.1.

SOURCE

VPS54 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of VPS54 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109145 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

VPS54 (C-16) is recommended for detection of VPS54 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other VPS family members.

VPS54 (C-16) is also recommended for detection of VPS54 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VPS54 siRNA (h): sc-94724, VPS54 siRNA (m): sc-155223, VPS54 shRNA Plasmid (h): sc-94724-SH, VPS54 shRNA Plasmid (m): sc-155223-SH, VPS54 shRNA (h) Lentiviral Particles: sc-94724-V and VPS54 shRNA (m) Lentiviral Particles: sc-155223-V.

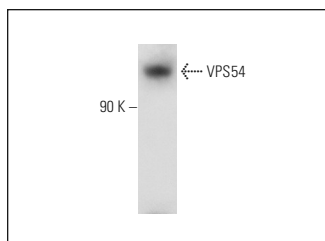
Molecular Weight of VPS54: 111 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



VPS54 (C-16): sc-109145. Western blot analysis of VPS54 expression in Jurkat whole cell lysate.

RESEARCH USE

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

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Try **VPS54 (B-4): sc-398300**, our highly recommended monoclonal alternative to VPS54 (C-16).