SANTA CRUZ BIOTECHNOLOGY, INC.

VPS33A siRNA (m): sc-63217

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. VPS33A (vacuolar protein sorting 33 homolog A) is a 596 amino acid protein that localizes to the cytoplasmic side of the membrane, as well as to the late endosome membrane, and belongs to the STXBP/Unc-18/SEC1 family. Existing as a component of a multi-protein heterooligomeric complex with other VPS proteins, VPS33A is thought to play a role in membrane docking/fusion reactions of late endosomes/lysosomes and may also participate in vesicle-mediated protein trafficking to lysosomal compartments. The gene encoding VPS33A maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

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2. Huizing, M., et al. 2001. Molecular cloning and characterization of human VPS18, VPS 11, VPS16, and VPS33. Gene 264: 241-247.
3. Kim, B.Y., et al. 2001. Molecular characterization of mammalian homologues of class C Vps proteins that interact with Syntaxin 7. J. Biol. Chem. 276: 29393-29402.
4. Suzuki, T., et al. 2003. The mouse organellar biogenesis mutant buff results from a mutation in Vps33a, a homologue of yeast vps33 and *Drosophila* carnation. Proc. Natl. Acad. Sci. USA 100: 1146-1150.
5. Gissen, P., et al. 2005. Comparative evolutionary analysis of VPS33 homologues: genetic and functional insights. Hum. Mol. Genet. 14: 1261-1270.
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CHROMOSOMAL LOCATION

Genetic locus: Vps33a (mouse) mapping to 5 F.

PRODUCT

VPS33A siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see VPS33A shRNA Plasmid (m): sc-63217-SH and VPS33A shRNA (m) Lentiviral Particles: sc-63217-V as alternate gene silencing products.

For independent verification of VPS33A (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-63217A, sc-63217B and sc-63217C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

VPS33A siRNA (m) is recommended for the inhibition of VPS33A expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor VPS33A gene expression knockdown using RT-PCR Primer: VPS33A (m)-PR: sc-63217-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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