SANTA CRUZ BIOTECHNOLOGY, INC.

VPS13C siRNA (h): sc-89975

BACKGROUND

The vacuolar protein sorting (VPS) pathway regulates protein sorting and vesicle-mediated intracellular transport. 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. In *Saccharomyces cerevisiae,* mutations in VPS genes result in secretion of proteins normally localized to the vacuole. VPS13C (vacuolar protein sorting 13 homolog C) is a 3,753 amino acid protein that belongs to the VPS family and is expressed in a variety of tissues. VPS13C shares significant similarities with yeast homolog and other VPS13 proteins of human origin. VPS13C exists as four alternatively spliced isoforms and is encoded by a gene located on human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

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2. Rampoldi, L., et al. 2001. A conserved sorting-associated protein is mutant in chorea-acanthocytosis. Nat. Genet. 28: 119-120.
3. Garrus, J.E., et al. 2001. Tsg101 and the vacuolar protein sorting pathway are essential for HIV-1 budding. Cell 107: 55-65.
4. Slagsvold, T., et al. 2004. The structure of an endosomal protein sorter. Dev. Cell 7: 457-458.
5. Velayos-Baeza, A., et al. 2004. Analysis of the human VPS13 gene family. Genomics 84: 536-549.
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CHROMOSOMAL LOCATION

Genetic locus: VPS13C (human) mapping to 15q22.2.

PRODUCT

VPS13C siRNA (h) 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 VPS13C shRNA Plasmid (h): sc-89975-SH and VPS13C shRNA (h) Lentiviral Particles: sc-89975-V as alternate gene silencing products.

For independent verification of VPS13C (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-89975A, sc-89975B and sc-89975C.

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

VPS13C siRNA (h) is recommended for the inhibition of VPS13C expression in human 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 VPS13C gene expression knockdown using RT-PCR Primer: VPS13C (h)-PR: sc-89975-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.

PROTOCOLS

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