

v-SNARE Ykt6p siRNA (h): sc-41342

BACKGROUND

Membrane traffic in eukaryotic cells requires the interaction of a vesicle-associated soluble N-ethylmaleimide-sensitive fusion (NSF) attachment protein receptor (v-SNARE) on transport vesicles with a SNARE on the target membrane (t-SNARE). Both v- and t-SNAREs are compartment-specific and bind each other directly and specifically. The v-SNAREs Ykt6p and Vti1p are involved in ER-Golgi and intra-Golgi membrane trafficking. For v-SNARE Ykt6p, membrane interaction is mediated through a cysteine/aliphatic/aliphatic/methionine or histidine (CAAX) C-terminal motif, a consensus sequence involved in prenylated membrane anchoring. The v-SNARE Vti1p interacts with the prevacuolar t-SNARE Pep12p in Golgi prevacuolar transport and with the *cis*-Golgi t-SNARE Sed5p in traffic to the *cis*-Golgi.

REFERENCES

1. McNew, J.A., et al. 1997. Ykt6p, a prenylated SNARE essential for endoplasmic reticulum-Golgi transport. *J. Biol. Chem.* 272: 17776-17783.
2. von Mollard, G.F., et al. 1998. A human homolog can functionally replace the yeast vesicle-associated SNARE Vti1p in two vesicle transport pathways. *J. Biol. Chem.* 273: 2624-2630.
3. Catchpoole, D.R., et al. 1999. Characterization of the sequence and expression of a Ykt6 prenylated SNARE from rat. *DNA Cell Biol.* 18: 141-145.
4. Tsui, M.M., et al. 2000. Yeast Golgi SNARE interactions are promiscuous. *J. Cell Sci.* 113: 145-152.

CHROMOSOMAL LOCATION

Genetic locus: YKT6 (human) mapping to 7p13.

PRODUCT

v-SNARE Ykt6p 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see v-SNARE Ykt6p shRNA Plasmid (h): sc-41342-SH and v-SNARE Ykt6p shRNA (h) Lentiviral Particles: sc-41342-V as alternate gene silencing products.

For independent verification of v-SNARE Ykt6p (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-41342A, sc-41342B and sc-41342C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

v-SNARE Ykt6p siRNA (h) is recommended for the inhibition of v-SNARE Ykt6p 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 μ M in 66 μ l. 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.

GENE EXPRESSION MONITORING

v-SNARE Ykt6p (E-2): sc-365732 is recommended as a control antibody for monitoring of v-SNARE Ykt6p gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor v-SNARE Ykt6p gene expression knockdown using RT-PCR Primer: v-SNARE Ykt6p (h)-PR: sc-41342-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Lee, S.B., et al. 2021. Tumor suppressor miR-584-5p inhibits migration and invasion in smoking related non-small cell lung cancer cells by targeting YKT6. *Cancers* 13: 1159.

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.