SANTA CRUZ BIOTECHNOLOGY, INC.

v-SNARE Vti1p siRNA (m): sc-41341

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. and Stevens, T.H. 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. and Wanjin, H. 1999. Characterization of the sequence and expression of a Ykt6 prenylated SNARE from rat. DNA Cell Biol. 18: 141-145.
4. Cao, X. and Barlowe, C. 2000. Asymmetric requirements for a Rab GTPase and SNARE proteins in fusion of COPII vesicles with acceptor membranes. J. Cell Biol. 149: 55-66.
5. Tsui, M.M. and Banfield, D.K. 2000. Yeast Golgi SNARE interactions are promiscuous. J. Cell Sci. 113: 145-152.

CHROMOSOMAL LOCATION

Genetic locus: Vti1b (mouse) mapping to 12 C3.

PRODUCT

v-SNARE Vti1p 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 v-SNARE Vti1p shRNA Plasmid (m): sc-41341-SH and v-SNARE Vti1p shRNA (m) Lentiviral Particles: sc-41341-V as alternate gene silencing products.

For independent verification of v-SNARE Vti1p (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-41341A, sc-41341B and sc-41341C.

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.

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

v-SNARE Vti1p siRNA (m) is recommended for the inhibition of v-SNARE Vti1p 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 v-SNARE Vti1p gene expression knockdown using RT-PCR Primer: v-SNARE Vti1p (m)-PR: sc-41341-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.