SANTA CRUZ BIOTECHNOLOGY, INC.

TRAPPC8 siRNA (h): sc-76761

BACKGROUND

TRS85, also designated Gsg1 or HsT2706, is a 1,435 amino acid Golgi apparatus protein belonging to the TRS85 family. A component of the multisubunit TRAPP (transport protein particle) complex, a well-characterized multisubunit tethering complex that acts as a GTP exchange factor, TRS85 may play a role in vesicular transport from endoplasmic reticulum to Golgi apparatus. In *Saccharomyces cerevisiae,* TRS85 is required for nonspecific autophagy, pexophagy and the cytoplasm to vacuole targeting (Cvt) pathway. Existing as 2 alternatively spliced isoforms, TRS85 is encoded by a gene located on human chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

REFERENCES

1. Carstea, E.D., et al. 1993. Linkage of Niemann-Pick disease type C to human chromosome 18. Proc. Natl. Acad. Sci. USA 90: 2002-2004.
2. Nazarko, T.Y., et al. 2005. TRS85 is required for macroautophagy, pexophagy and cytoplasm to vacuole targeting in *Yarrowia lipolytica* and *Saccharomyces cerevisiae.* Autophagy 1: 37-45.
3. Meiling-Wesse, K., et al. 2005. TRS85 (Gsg1), a component of the TRAPP complexes, is required for the organization of the preautophagosomal structure during selective autophagy via the Cvt pathway. J. Biol. Chem. 280: 33669-33678.
4. Kim, Y.G., et al. 2006. The architecture of the multisubunit TRAPP I complex suggests a model for vesicle tethering. Cell 127: 817-830.
5. Liang, Y., et al. 2007. The role of TRS65 in the Ypt/Rab guanine nucleotide exchange factor function of the TRAPP II complex. Mol. Biol. Cell 18: 2533-2541.
6. Sacher, M., et al. 2008. The TRAPP complex: insights into its architecture and function. Traffic 9: 2032-2042.

CHROMOSOMAL LOCATION

Genetic locus: TRAPPC8 (human) mapping to 18q12.1.

PRODUCT

TRAPPC8 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 TRAPPC8 shRNA Plasmid (h): sc-76761-SH and TRAPPC8 shRNA (h) Lentiviral Particles: sc-76761-V as alternate gene silencing products.

For independent verification of TRAPPC8 (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-76761A, sc-76761B and sc-76761C.

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

TRAPPC8 siRNA (h) is recommended for the inhibition of TRAPPC8 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 TRAPPC8 gene expression knockdown using RT-PCR Primer: TRAPPC8 (h)-PR: sc-76761-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.