SANTA CRUZ BIOTECHNOLOGY, INC.

TOCA-1 siRNA (m): sc-106624

BACKGROUND

TOCA-1 (transducer of Cdc42-dependent Actin assembly protein 1), also known as FNBP1L (formin binding protein 1-like), is a 605 amino acid protein that localizes to the cytoplasm and the cytoskeleton, as well as to cytoplasmic vesicles and the cell membrane, and contains one FCH domain, one REM repeat and one SH3 domain. Existing as multiple alternatively spliced isoforms, TOCA-1 interacts with Cdc42 and is required for the coordination of membrane tubulation with Actin cytoskeletal reorganization during endocytosis. Additionally, TOCA-1 is involved in membrane invagination, tubule formation and Actin polymerization. The gene encoding TOCA-1 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Ho, H.Y., et al. 2004. TOCA-1 mediates Cdc42-dependent Actin nucleation by activating the N-WASP-WIP complex. Cell 118: 203-216.
2. Katoh, M., et al. 2004. Identification and characterization of human FNBP1L gene in silico. Int. J. Mol. Med. 13: 157-162.
3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608848. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Kakimoto, T., et al. 2006. Regulation of neuronal morphology by TOCA-1, an F-BAR/EFC protein that induces plasma membrane invagination. J. Biol. Chem. 281: 29042-29053.
5. Tsujita, K., et al. 2006. Coordination between the Actin cytoskeleton and membrane deformation by a novel membrane tubulation domain of PCH proteins is involved in endocytosis. J. Cell Biol. 172: 269-279.
6. Kovacs, E.M., et al. 2006. Tuba stimulates intracellular N-WASP-dependent Actin assembly. J. Cell Sci. 119: 2715-2726.

CHROMOSOMAL LOCATION

Genetic locus: Fnbp1l (mouse) mapping to 3 G1.

PRODUCT

TOCA-1 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 TOCA-1 shRNA Plasmid (m): sc-106624-SH and TOCA-1 shRNA (m) Lentiviral Particles: sc-106624-V as alternate gene silencing products.

For independent verification of TOCA-1 (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-106624A, sc-106624B and sc-106624C.

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

TOCA-1 siRNA (m) is recommended for the inhibition of TOCA-1 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 TOCA-1 gene expression knockdown using RT-PCR Primer: TOCA-1 (m)-PR: sc-106624-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.