SANTA CRUZ BIOTECHNOLOGY, INC.

TPPP3 siRNA (h): sc-93108

BACKGROUND

Tubulin family members are globular proteins important in the assembly of microtubules. Microtubules are structural components that play important roles in mitosis, cytokinesis and vesicle transport. TPPP3 (Tubulin polymerization-promoting protein family member 3), also known as CGI-38 or p20, is a 176 amino acid protein belonging to the TPPP family. Localizing to the cytoplasm, TPPP3 has the ability to bundle microtubules and induce tubulin polymerization. The gene encoding TPPP3 maps to human chromosome 16q22.1. When the TPPP3 gene is silenced, tumor progression is reduced, suggesting a role in tumorigenesis and metastasis.

REFERENCES

1. Vincze, O., et al. 2006. Tubulin polymerization promoting proteins (TPPPs): members of a new family with distinct structures and functions. Biochemistry 45: 13818-13826.
2. Preusser, M., et al. 2007. TPPP/p25 in brain tumours: expression in non-neoplastic oligodendrocytes but not in oligodendroglioma cells. Acta Neuropathol. 113: 213-215.
3. Staverosky, J.A., et al. 2009. Tubulin polymerization-promoting protein family member 3, TPPP3, is a specific marker of the differentiating tendon sheath and synovial joints. Dev. Dyn. 238: 685-692.
4. Zhou, W., et al. 2010. Depletion of Tubulin polymerization promoting protein family member 3 suppresses HeLa cell proliferation. Mol. Cell. Biochem. 333: 91-98.

CHROMOSOMAL LOCATION

Genetic locus: TPPP3 (human) mapping to 16q22.1.

PRODUCT

TPPP3 siRNA (h) is a pool of 2 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 TPPP3 shRNA Plasmid (h): sc-93108-SH and TPPP3 shRNA (h) Lentiviral Particles: sc-93108-V as alternate gene silencing products.

For independent verification of TPPP3 (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-93108A and sc-93108B.

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

TPPP3 siRNA (h) is recommended for the inhibition of TPPP3 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 TPPP3 gene expression knockdown using RT-PCR Primer: TPPP3 (h)-PR: sc-93108-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Shukla, V., et al. 2019. Inhibition of TPPP3 attenuates β-catenin/NFκB/Cox-2 signaling in endometrial stromal cells and impairs decidualization. J. Endocrinol. 240: 417-429.

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.