

TPPP3 siRNA (m): sc-154573

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

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2. Preusser, M., Lehotzky, A., Budka, H., Ovádi, J. and Kovács, G.G. 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., Pryce, B.A., Watson, S.S. and Schweitzer, R. 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., Wang, X., Li, L., Feng, X., Yang, Z., Zhang, W. and Hu, R. 2010. Depletion of tubulin polymerization promoting protein family member 3 suppresses HeLa cell proliferation. *Mol. Cell. Biochem.* 333: 91-98.
5. Zhou, W., Li, J., Wang, X. and Hu, R. 2010. Stable knockdown of TPPP3 by RNA interference in Lewis lung carcinoma cell inhibits tumor growth and metastasis. *Mol. Cell. Biochem.* 343: 231-238.

CHROMOSOMAL LOCATION

Genetic locus: Tppp3 (mouse) mapping to 8 D3.

PRODUCT

TPPP3 siRNA (m) is a target-specific 19-25 nt siRNA 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 TPPP3 shRNA Plasmid (m): sc-154573-SH and TPPP3 shRNA (m) Lentiviral Particles: sc-154573-V as alternate gene silencing 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 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

TPPP3 siRNA (m) is recommended for the inhibition of TPPP3 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TPPP3 gene expression knockdown using RT-PCR Primer: TPPP3 (m)-PR: sc-154573-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. Shukla, V., Popli, P., Kaushal, J.B., Gupta, K. and Dwivedi, A. 2018. Uterine TPPP3 plays important role in embryo implantation via modulation of β -catenin. *Biol. Reprod.* 99: 982-999.

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.