SANTA CRUZ BIOTECHNOLOGY, INC.

WTIP siRNA (r): sc-270332

BACKGROUND

Wilms' tumor (WT) is an embryonal malignancy of the kidney that affects 1 in 10,000 infants and is observed in both sporadic and inherited forms. The Wilms' tumor locus has been mapped at chromosome 11p13 as a tumor suppressor gene which encodes a DNA binding protein with four zinc fingers and a glutamine-proline rich amino-terminus. WTIP (Wilms tumor 1 interacting protein) is a 654 amino acid LIM domain protein that belongs to the zyxin/ajuba family, interacts with WT1 (Wilms tumor 1) and is thought to play a role in slit diaphragm protein assembly. Acting as a transcription regulator, WTIP shuttles between nucleus and adhesion structures following podocyte injury to repress WT1-dependent transcription regulation. WTIP contains three LIM zinc-binding domains and is encoded by a gene that maps to human chromosome 19q13.11.

REFERENCES

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3. Srichai, M.B., et al. 2004. A WT1 co-regulator controls podocyte phenotype by shuttling between adhesion structures and nucleus. J. Biol. Chem. 279: 14398-14408.
4. Yang, L., et al. 2007. A tumor suppressor and oncogene: the WT1 story. Leukemia 21: 868-876.
5. Langer, E.M., et al. 2008. Ajuba LIM proteins are snail/slug corepressors required for neural crest development in *Xenopus*. Dev. Cell 14: 424-436.
6. van Wijk, N.V., et al. 2009. The LIM domain protein WTIP interacts with the receptor tyrosine kinase Ror2 and inhibits canonical Wnt signalling. Biochem. Biophys. Res. Commun. 390: 211-216.
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8. Hou, Z., et al. 2010. LIM protein Ajuba functions as a nuclear receptor corepressor and negatively regulates retinoic acid signaling. Proc. Natl. Acad. Sci. USA 107: 2938-2943.

CHROMOSOMAL LOCATION

Genetic locus: Wtip (rat) mapping to 1q21.

PRODUCT

WTIP siRNA (r) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see WTIP shRNA Plasmid (r): sc-270332-SH and WTIP shRNA (r) Lentiviral Particles: sc-270332-V as alternate gene silencing products.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

WTIP siRNA (r) is recommended for the inhibition of WTIP expression in rat 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 WTIP gene expression knockdown using RT-PCR Primer: WTIP (r)-PR: sc-270332-PR (20 µl, 562 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.