SANTA CRUZ BIOTECHNOLOGY, INC.

Teneurin-3 siRNA (h): sc-106789

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The Power to Question

BACKGROUND

Teneurin-3, also known as Ten-3, TNM3 or ODZ3, is a 2,699 amino acid single-pass type II membrane protein that contains 25 YD repeats, 8 EGF-like domains, 5 NHL repeats and one teneurin N-terminal domain. Localized to the membrane and expressed in brain, testis and ovary, Teneurin-3 exists as a disulfide-liked homodimer that is thought to function as a cellular signal transducer. Additionally, Teneurin-3 may participate in eye-specific patterning in the visual pathway and is required for aligned binocular vision. The gene encoding Teneurin-3 maps to chromosome 4q35.1. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes, one of which is the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease. FGFR-3 is also encoded on chromosome 4p16.3 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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2. Nagase, T., Kikuno, R., Ishikawa, K., Hirosawa, M. and Ohara, O. 2000. Prediction of the coding sequences of unidentified human genes. XVII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 143-150.
3. Ben-Zur, T., Feige, E., Motro, B. and Wides, R. 2000. The mammalian ODZ gene family: homologs of a *Drosophila* pair-rule gene with expression implying distinct yet overlapping developmental roles. Dev. Biol. 217: 107-120.
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CHROMOSOMAL LOCATION

Genetic locus: TENM3 (human) mapping to 4q35.1.

PRODUCT

Teneurin-3 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 Teneurin-3 shRNA Plasmid (h): sc-106789-SH and Teneurin-3 shRNA (h) Lentiviral Particles: sc-106789-V as alternate gene silencing products.

For independent verification of Teneurin-3 (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-106789A, sc-106789B and sc-106789C.

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

Teneurin-3 siRNA (h) is recommended for the inhibition of Teneurin-3 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 Teneurin-3 gene expression knockdown using RT-PCR Primer: Teneurin-3 (h)-PR: sc-106789-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.