SANTA CRUZ BIOTECHNOLOGY, INC.

Teneurin-1 siRNA (h): sc-106324

BACKGROUND

Teneurin-1 (Ten-1), also known as tenascin M1 (TEN-M1), TNM, ODZ1 (odz, odd Oz/ten-m homolog 1) or ODZ3, is a 2,725 amino acid single-pass type II membrane protein that belongs to the tenascin family and Teneurin subfamily. Localized to the membrane and expressed in fetal brain, Teneurin-1 exists as a disulfide-liked homodimer that is thought to function as a cellular signal transducer. Teneurin-1 contains cytoplasmic proline-rich regions that may function as docking domains for SH3-containing proteins, along with 8 EGF-like domains, 23 YD repeats, five NHL repeats and one Teneurin N-terminal domain. The gene encoding Teneurin-1 maps to human chromosome Xq25 and mouse chromosome X A4.

REFERENCES

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2. Ben-Zur, T. and Wides, R. 1999. Mapping homologs of *Drosophila* odd Oz (odz): Doc4/Odz4 to mouse chromosome 7, Odz1 to mouse chromosome 11; and ODZ3 to human chromosome Xq25. Genomics 58: 102-103.
3. Minet, A.D., Rubin, B.P., Tucker, R.P., Baumgartner, S. and Chiquet-Ehrismann, R. 1999. Teneurin-1, a vertebrate homologue of the *Drosophila* pair-rule gene ten-m, is a neuronal protein with a novel type of heparin-binding domain. J. Cell Sci. 112: 2019-2032.
4. 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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6. Nunes, S.M., Ferralli, J., Choi, K., Brown-Luedi, M., Minet, A.D. and Chiquet-Ehrismann, R. 2005. The intracellular domain of teneurin-1 interacts with MBD1 and CAP/ponsin resulting in subcellular codistribution and translocation to the nuclear matrix. Exp. Cell Res. 305: 122-132.

CHROMOSOMAL LOCATION

Genetic locus: ODZ1 (human) mapping to Xq25.

PRODUCT

Teneurin-1 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-1 shRNA Plasmid (h): sc-106324-SH and Teneurin-1 shRNA (h) Lentiviral Particles: sc-106324-V as alternate gene silencing products.

For independent verification of Teneurin-1 (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-106324A, sc-106324B and sc-106324C.

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-1 siRNA (h) is recommended for the inhibition of Teneurin-1 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.

GENE EXPRESSION MONITORING

Teneurin-1 (B-1): sc-398018 is recommended as a control antibody for monitoring of Teneurin-1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Teneurin-1 gene expression knockdown using RT-PCR Primer: Teneurin-1 (h)-PR: sc-106324-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.