



Tns siRNA (h): sc-44159

BACKGROUND

Tensin (Tns) is an Actin filament capping protein localized to various types of adherens junctions in muscle and non-muscle cells. Tensin is involved in the maintenance of cellular structure by anchoring Actin filaments at the focal adhesion via F-Actin binding and capping activities. However, tensin also contains a Src homology 2 (SH2) domain and has the ability to be phosphorylated. Tensin is phosphorylated on tyrosine, serine and threonine residues, suggesting that it might participate in signal transduction cascades. These diverse characteristics in a single molecule indicate that tensin may be an important link between the cytoskeleton and signal transduction pathways.

REFERENCES

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2. Lo, S.H., et al. 1994. Interactions of tensin with Actin and identification of its three distinct Actin-binding domains. *J. Cell Biol.* 125: 1067-1075.
3. Lo, S.H., et al. 1994. Tensin: a potential link between the cytoskeleton and signal transduction. *Bioessays* 16: 817-823.
4. Chuang, J.Z., et al. 1995. Molecular cloning, expression and mapping of the high affinity Actin-capping domain of chicken cardiac tensin. *J. Cell Biol.* 128: 1095-1109.
5. Haynie, D.T., et al. 1996. The N-terminal domains of tensin and auxilin are phosphatase homologues. *Protein Sci.* 5: 2643-2646.
6. Chen, H., et al. 2000. Molecular characterization of human tensin. *Biochem. J.* 351: 403-411.
7. Katz, B.Z., et al., 2000. Tensin can induce JNK and p38 activation. *Biochem. Biophys. Res. Commun.* 272: 717-720.
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CHROMOSOMAL LOCATION

Genetic locus: TNS1 (human) mapping to 2q35.

PRODUCT

Tns 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Tns shRNA Plasmid (h): sc-44159-SH and Tns shRNA (h) Lentiviral Particles: sc-44159-V as alternate gene silencing products.

For independent verification of Tns (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-44159A, sc-44159B and sc-44159C.

PROTOCOLS

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

Tns siRNA (h) is recommended for the inhibition of Tns 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 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 Tns gene expression knockdown using RT-PCR Primer: Tns (h)-PR: sc-44159-PR (20 μ l, 488 bp). 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.