SANTA CRUZ BIOTECHNOLOGY, INC.

Tns4 siRNA (m): sc-76706

BACKGROUND

The Tensin (Tns) family of proteins is involved in the maintenance of cellular structure by anchoring Actin filaments at the focal adhesion via F-Actin binding and capping activities. Tns proteins contain a Src homology 2 (SH2) domain and have the ability to be phosphorylated, suggesting an additional role in signal transduction cascades. These diverse characteristics indicate that Tns proteins may be important links between the cytoskeleton and signal transduction pathways. Tns4 (tensin 4), also known as CTEN, is a 715 amino acid protein that localizes to focal adhesions and contains one SH2 domain and one phosphatase tensin-type domain. Expressed in placenta and prostate, Tns4 binds to Actin filaments and is thought to be involved in cartilage development, cell migration and apoptosis, and may also play a role in linking signal transduction pathways to the cytoskeleton. Tns4 is subject to post-translational phosphorylation and is down-regulated in prostate cancer cells, suggesting a role in tumor suppression.

REFERENCES

1. Bockholt, S.M. and Burridge, K. 1993. Cell spreading on extracellular matrix proteins induces tyrosine phosphorylation of tensin. J. Biol. Chem. 268: 14565-14567.
2. Lo, S.H., et al. 1994. Tensin: a potential link between the cytoskeleton and signal transduction. Bioessays 16: 817-823.
3. 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.
4. Lo, S.H. and Lo, T.B. 2002. Cten, a COOH-terminal tensin-like protein with prostate restricted expression, is down-regulated in prostate cancer. Cancer Res. 62: 4217-4221.
5. Sasaki, H., et al. 2003. Cten mRNA expression was correlated with tumor progression in lung cancers. Lung Cancer 40: 151-155.
6. Sasaki, H., et al. 2003. Cten mRNA expression is correlated with tumor progression in thymoma. Tumour Biol. 24: 271-274.

CHROMOSOMAL LOCATION

Genetic locus: Tns4 (mouse) mapping to 11 D.

PRODUCT

Tns4 siRNA (m) 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 Tns4 shRNA Plasmid (m): sc-76706-SH and Tns4 shRNA (m) Lentiviral Particles: sc-76706-V as alternate gene silencing products.

For independent verification of Tns4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76706A, sc-76706B and sc-76706C.

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 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

Tns4 siRNA (m) is recommended for the inhibition of Tns4 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 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 Tns4 gene expression knockdown using RT-PCR Primer: Tns4 (m)-PR: sc-76706-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.