SANTA CRUZ BIOTECHNOLOGY, INC.

TTC19 siRNA (h): sc-94186

BACKGROUND

The tetratricopeptide repeat (TPR) motif is a degenerate, 34 amino acid sequence found in many proteins and acts to mediate protein-protein interactions in various pathways. At the sequence level, there can be up to 16 tandem TPR repeats, each of which has a helix-turn-helix shape that associates with other TPR repeats to achieve ligand binding specificity. TTC19 (tetratricopeptide repeat domain 19) is a 501 amino acid protein containing five TPR repeats. TTC19 is encoded be a gene located on human chromosome 17p12, which comprises over 2.5% of the human genome and encodes over 1,200 genes, some of which are involved in tumor suppression and in the pathogenesis of Li-Fraumeni syndrome, early onset breast cancer and a predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Bradlow, H.L. 1982. A reassessment of the role of breast tumor aromatization. Cancer Res. 42: 3382s-3386s.
2. Young, J.C., et al. 1998. Specific binding of tetratricopeptide repeat proteins to the C-terminal 12-kDa domain of HSP 90. J. Biol. Chem. 273: 18007-18010.
3. Hey, Y., et al. 2000. Assignment of TTC4 to human chromosome band 1p31.3 and a pseudogene TTC4P to 7p14→p13 by *in situ* hybridization. Cytogenet. Cell Genet. 88: 272-274.
4. Su, G., et al. 2000. Genomic structure of the human tetratricopeptide repeat-containing gene, TTC4, from chromosome region 1p31 and mutation analysis in breast cancers. Int. J. Mol. Med. 5: 197-200.
5. Marty, C., et al. 2003. Identification of tetratricopeptide repeat 1 as an adaptor protein that interacts with heterotrimeric G proteins and the small GTPase Ras. Mol. Cell. Biol. 23: 3847-3858.
6. Oh, W.K. and Song, J. 2003. Cooperative interaction of HSP 40 and TPR1 with HSP 70 reverses HSP 70-HspBP1 complex formation. Mol. Cell 16: 84-91.

CHROMOSOMAL LOCATION

Genetic locus: TTC19 (human) mapping to 17p12.

PRODUCT

TTC19 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 TTC19 shRNA Plasmid (h): sc-94186-SH and TTC19 shRNA (h) Lentiviral Particles: sc-94186-V as alternate gene silencing products.

For independent verification of TTC19 (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-94186A, sc-94186B and sc-94186C.

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

TTC19 siRNA (h) is recommended for the inhibition of TTC19 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 TTC19 gene expression knockdown using RT-PCR Primer: TTC19 (h)-PR: sc-94186-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.