SANTA CRUZ BIOTECHNOLOGY, INC.

# TTC17 siRNA (h): sc-97034

## 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 stacks on other TPR repeats to achieve ligand binding specificity. TTC17 (tetratricopeptide repeat protein 17) is a 1,141 amino acid protein belonging to the TPR family. Containing 6 TPR repeats, TTC17 is encoded by a gene located in a region of human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that map to chromosome 11.

## REFERENCES


1. Blatch, G.L. and Lässle, M. 1999. The tetratricopeptide repeat: a structural motif mediating protein-protein interactions. Bioessays 21: 932-939.
2. Andrade, M.A., et al. 2001. Protein repeats: structures, functions, and evolution. J. Struct. Biol. 134: 117-131.
3. Smith, D.F. 2004. Tetratricopeptide repeat cochaperones in steroid receptor complexes. Cell Stress Chaperones 9: 109-121.
4. Banerjee, A., et al. 2008. Control of glucocorticoid and progesterone receptor subcellular localization by the ligand-binding domain is mediated by distinct interactions with tetratricopeptide repeat proteins. Biochemistry 47: 10471-10480.
5. Wilson, J.B., et al. 2010. Several tetratricopeptide repeat (TPR) motifs of FANCG are required for assembly of the BRCA2/D1-D2-G-X3 complex, FANCD2 monoubiquitylation and phleomycin resistance. Mutat. Res. 689: 12-20.
6. Schülke, J.P., et al. 2010. Differential impact of tetratricopeptide repeat proteins on the steroid hormone receptors. PLoS ONE 5: e11717.
7. Krachler, A.M., et al. 2010. Self-association of TPR domains: lessons learned from a designed, consensus-based TPR oligomer. Proteins 78: 2131-2143.


## CHROMOSOMAL LOCATION

Genetic locus: TTC17 (human) mapping to 11p12.

## PRODUCT

TTC17 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 TTC17 shRNA Plasmid (h): sc-97034-SH and TTC17 shRNA (h) Lentiviral Particles: sc-97034-V as alternate gene silencing products.

For independent verification of TTC17 (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-97034A, sc-97034B and sc-97034C.

## 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

TTC17 siRNA (h) is recommended for the inhibition of TTC17 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 TTC17 gene expression knockdown using RT-PCR Primer: TTC17 (h)-PR: sc-97034-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. Lam, W.Y., et al. 2021. Identification of a wide spectrum of ciliary gene mutations in nonsyndromic biliary atresia patients implicates ciliary dysfunction as a novel disease mechanism. EBioMedicine 71: 103530.


## 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.