

# Treslin siRNA (h): sc-90086

## BACKGROUND

Treslin, also known as TICRR (TopBP1-interacting checkpoint and replication regulator), SLD3 or C15orf42, is a 1,910 amino acid nuclear protein that belongs to the Treslin family. Treslin is involved in the initiation and regulation of DNA replication via interactions with TopBP1 and the Cdk2-mediated packaging of Cdc45 onto replication origins. Treslin is required for the pre-replication complex (pre-RC) transition to pre-initiation complex (pre-IC), and for the prevention of mitotic entry after treatment with ionizing radiation. Existing as two alternatively spliced isoforms, Treslin is encoded by a gene that maps to human chromosome 15q26.1 and mouse chromosome 7 D3.

## REFERENCES

1. Gauci, S., Helbig, A.O., Slijper, M., Krijgsveld, J., Heck, A.J. and Mohammed, S. 2009. Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach. *Anal. Chem.* 81: 4493-4501.
2. Mayya, V., Lundgren, D.H., Hwang, S.I., Rezaul, K., Wu, L., Eng, J.K., Rodionov, V. and Han, D.K. 2009. Quantitative phosphoproteomic analysis of T cell receptor signaling reveals system-wide modulation of protein-protein interactions. *Sci. Signal.* 2: ra46.
3. Kumagai, A., Shevchenko, A., Shevchenko, A. and Dunphy, W.G. 2010. Treslin collaborates with TopBP1 in triggering the initiation of DNA replication. *Cell* 140: 349-359.
4. Sansam, C.L., Cruz, N.M., Danielian, P.S., Amsterdam, A., Lau, M.L., Hopkins, N. and Lees, J.A. 2010. A vertebrate gene, ticrr, is an essential checkpoint and replication regulator. *Genes Dev.* 24: 183-194.
5. Zegerman, P. and Diffley, J.F. 2010. Checkpoint-dependent inhibition of DNA replication initiation by Sld3 and Dbf4 phosphorylation. *Nature* 467: 474-478.
6. Lopez-Mosqueda, J., Maas, N.L., Jonsson, Z.O., Defazio-Eli, L.G., Wohlschlegel, J. and Toczyski, D.P. 2010. Damage-induced phosphorylation of Sld3 is important to block late origin firing. *Nature* 467: 479-483.
7. Wang, Z., Kim, E., Leffak, M. and Xu, Y.J. 2012. Treslin, DUE-B, and GEMC1 cannot complement Sld3 mutants in fission yeast. *FEMS Yeast Res.* 12: 486-490.

## CHROMOSOMAL LOCATION

Genetic locus: TICRR (human) mapping to 15q26.1.

## PRODUCT

Treslin 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Treslin shRNA Plasmid (h): sc-90086-SH and Treslin shRNA (h) Lentiviral Particles: sc-90086-V as alternate gene silencing products.

For independent verification of Treslin (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-90086A, sc-90086B and sc-90086C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Treslin siRNA (h) is recommended for the inhibition of Treslin 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  $\mu$ M in 66  $\mu$ 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 Treslin gene expression knockdown using RT-PCR Primer: Treslin (h)-PR: sc-90086-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.