SANTA CRUZ BIOTECHNOLOGY, INC.

TRRAP siRNA (m): sc-36747

BACKGROUND

The transcription factors c-Myc and E2F are involved in regulating cell cycle progression. Overexpression of c-Myc in certain cell types induces noncycling cells to enter the cell cycle via a mechanism involving E2F-1. E2F-1 is thought to regulate c-Myc expression via interactions with the retinoblastoma protein. TRRAP (for transformation/transcription domain-associated protein) interacts specifically with both c-Myc and E2F-1. Expression of *trans*-activated mutant TRRAP inhibits the oncogenic transformation of both c-Myc and E2F-1, suggesting that TRRAP is required for these oncogenic transcription factor pathways. TRRAP shares homology with the Atm/PI 3-kinase family, and it is highly conserved in evolution.

REFERENCES

1. Ishida, S., et al. 1995. A direct role of transcription factor E2F in c-Myc gene expression during granulocytic and macrophage-like differentiation of HL60 cells. Cell Growth Differ. 6: 229-237.
2. Savitsky, K., et al. 1995. The complete sequence of the coding region of the Atm gene reveals similarity to cell cycle regulators in different species. Hum. Mol. Genet. 4: 2025-2032.
3. Alexandrow, M.G., et al. 1998. c-Myc-enhanced S phase entry in keratinocytes is associated with positive and negative effects on cyclin-dependent kinases. J. Cell. Biochem. 70: 528-542.
4. McMahon, S.B., et al. 1998. The novel Atm-related protein TRRAP is an essential cofactor for the c-Myc and E2F oncoproteins. Cell 94: 363-374.
5. Jeggo, P.A., et al. 1998. Splitting the Atm: distinct repair and checkpoint defects in ataxia-talangiectasia. Trends Genet. 14: 312-316.

CHROMOSOMAL LOCATION

Genetic locus: Trrap (mouse) mapping to 5 G2.

PRODUCT

TRRAP 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 TRRAP shRNA Plasmid (m): sc-36747-SH and TRRAP shRNA (m) Lentiviral Particles: sc-36747-V as alternate gene silencing products.

For independent verification of TRRAP (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-36747A, sc-36747B and sc-36747C.

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

TRRAP siRNA (m) is recommended for the inhibition of TRRAP 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 TRRAP gene expression knockdown using RT-PCR Primer: TRRAP (m)-PR: sc-36747-PR (20 µl, 503 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.

PROTOCOLS

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