SANTA CRUZ BIOTECHNOLOGY, INC.

TOE1 siRNA (m): sc-106625

BACKGROUND

TOE1 (target of EGR-1 protein 1) is a 510 amino acid long protein that belongs to the CAF1 family. It is a downstream target of EGR-1 and plays an important role mediating the inhibitory growth effect of EGR-1. EGR-1 directly binds the TOE1 promoter region and activates its expression. TOE1 induces the expression of TGFβ and p21 and plays a role in cell cycle regulation and the inhibition of cell growth. The activity and nucleolar localization of TOE1 correlates with a G_2 cell cycle phase delay which is likely due to an increased expression of p21. In addition, TOE1 may function via an interaction with p53 and possible modification to its activity. TOE1 is expressed at various levels in all adult tissues and specifically localizes to the nuclear speckles.

REFERENCES

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3. Farivar, R., Zangenehpour, S. and Chaudhuri, A. 2004. Cellular-resolution activity mapping of the brain using immediate-early gene expression. Front. Biosci. 9: 104-109.
4. Will, C.L., Schneider, C., Hossbach, M., Urlaub, H., Rauhut, R., Elbashir, S., Tuschl, T. and Lührmann, R. 2004. The human 18S U11/U12 snRNP contains a set of novel proteins not found in the U2-dependent spliceosome. RNA 10: 929-941.
5. Ferraro, B., Bepler, G., Sharma, S., Cantor, A. and Haura, E.B. 2005. EGR1 predicts PTEN and survival in patients with non-small-cell lung cancer. J. Clin. Oncol. 23: 1921-1926.
6. Wagner, E., Clement, S.L. and Lykke-Andersen, J. 2007. An unconventional human Ccr4-Caf1 deadenylase complex in nuclear cajal bodies. Mol. Cell. Biol. 27: 1686-1695.

CHROMOSOMAL LOCATION

Genetic locus: Toe1 (mouse) mapping to 4 D1.

PRODUCT

TOE1 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 TOE1 shRNA Plasmid (m): sc-106625-SH and TOE1 shRNA (m) Lentiviral Particles: sc-106625-V as alternate gene silencing products.

For independent verification of TOE1 (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-106625A, sc-106625B and sc-106625C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

TOE1 siRNA (m) is recommended for the inhibition of TOE1 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 TOE1 gene expression knockdown using RT-PCR Primer: TOE1 (m)-PR: sc-106625-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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