SANTA CRUZ BIOTECHNOLOGY, INC.

TELO2 siRNA (h): sc-93308

BACKGROUND

TELO2 (telomere maintenance 2), also known as CLK2 or TEL2, is an 837 amino acid protein that is expressed in the cytoplasm and the nucleus. Belonging to the TEL2 family, TELO2 may be involved in telomere length and growth regulation. Cells overexpressing TELO2 are hypersensitive to hydroxyurea (HU) and undergo apoptotic death in response to HU treatment. TELO2 functions as an S-phase checkpoint protein in the cell cycle and is required for survival of replication fork arrest. Considered a highly conserved regulator of PIKKs (phosphatidylinositol 3-kinase-related protein kinases), which include SMG1, TELO2 may be essential in embryonic development and may also play a role in DNA repair. The gene encoding TELO2 is located on human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TELO2 (human) mapping to 16p13.3.

PRODUCT

TELO2 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 TELO2 shRNA Plasmid (h): sc-93308-SH and TELO2 shRNA (h) Lentiviral Particles: sc-93308-V as alternate gene silencing products.

For independent verification of TELO2 (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-93308A, sc-93308B and sc-93308C.

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

TELO2 siRNA (h) is recommended for the inhibition of TELO2 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 TELO2 gene expression knockdown using RT-PCR Primer: TELO2 (h)-PR: sc-93308-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.

PROTOCOLS

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