SANTA CRUZ BIOTECHNOLOGY, INC.

SDE2 siRNA (h): sc-88617

BACKGROUND

Telomeres are DNA-protein structures that protect the ends of linear chromosomes and help maintain genomic stability and cell phenotype. Telomere maintenance involves the cooperation of several telomeric factors, including telomerase. Protein SDE2 of *Schizosaccharomyces pombe* is a nuclear protein that is suggested to be critical for telomeric silencing and genomic stability by interacting with telomere regulators. SDE2 (SDE2 telomere maintenance homolog *(S. pombe)),* also known as C1orf55 or dJ671D7.1, is a 451 amino acid coil-coil domain containing protein that belongs to the SDE2 family and exists as three alternatively spliced isoforms. SDE2 is encoded by a gene that is located on human chromosome 1q42.12. Human chromosome 1 is the largest chromosome and spans about 260 million base pairs and makes up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SDE2 (human) mapping to 1q42.12.

PRODUCT

SDE2 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 SDE2 shRNA Plasmid (h): sc-88617-SH and SDE2 shRNA (h) Lentiviral Particles: sc-88617-V as alternate gene silencing products.

For independent verification of SDE2 (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-88617A, sc-88617B and sc-88617C.

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

SDE2 siRNA (h) is recommended for the inhibition of SDE2 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 SDE2 gene expression knockdown using RT-PCR Primer: SDE2 (h)-PR: sc-88617-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.