SANTA CRUZ BIOTECHNOLOGY, INC.

CIZ1 siRNA (m): sc-142350

BACKGROUND

CIZ1 (Cip1-interacting zinc finger protein, CDKN1A-interacting zinc finger protein 1) is a 898 amino acid protein encoded by the human gene CIZ1. CIZ1, a nuclear protein, is a member of the matrin 3 family that contains one matrin-type zinc finger. CIZ1 is composed of two functionally distinct domains: an N-terminal replication domain and a C-terminal nuclear matrix anchor. Patterns of CIZ1 isoform expression have the potential to influence DNA replication, as the exclusion of exon 4 influences the spatial distribution of the CIZ1 protein within the nucleus.

REFERENCES

1. Warder, D.E., et al. 2003. Ciz1, Cip1 interacting zinc finger protein 1 binds the consensus DNA sequence ARYSR(0-2)YYAC. J. Biomed. Sci. 10: 406-417.
2. Miccoli, L., et al. 2003. Selective interactions of human kin17 and RPA proteins with chromatin and the nuclear matrix in a DNA damage- and cell cycle-regulated manner. Nucleic Acids Res. 31: 4162-4175.
3. Coverley, D., et al. 2004. Ciz1 promotes mammalian DNA replication. J. Cell Sci. 118: 101-112.
4. Anachkova, B., et al. 2005. Nuclear matrix support of DNA replication. J. Cell. Biochem. 96: 951-961.
5. Radichev, I., et al. 2005. Initiation of DNA replication at a nuclear matrix-attached chromatin fraction. J. Cell. Physiol. 203: 71-77.
6. Ainscough, J.F., et al. 2006. C-terminal domains deliver the DNA replication factor Ciz1 to the nuclear matrix. J. Cell Sci. 120: 115-124.
7. Rahman, F.A., et al. 2007. Cancer-associated missplicing of exon 4 influences the subnuclear distribution of the DNA replication factor CIZ1. Hum. Mutat. 28: 993-1004.
8. Lukasik, A., et al. 2008. Ciz1, a p21(cip1/Waf1)-interacting zinc finger protein and DNA replication factor, is a novel molecular partner for human enhancer of rudimentary homolog. FEBS J. 275: 332-340.

CHROMOSOMAL LOCATION

Genetic locus: Ciz1 (mouse) mapping to 2 B.

PRODUCT

CIZ1 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 CIZ1 shRNA Plasmid (m): sc-142350-SH and CIZ1 shRNA (m) Lentiviral Particles: sc-142350-V as alternate gene silencing products.

For independent verification of CIZ1 (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-142350A, sc-142350B and sc-142350C.

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

CIZ1 siRNA (m) is recommended for the inhibition of CIZ1 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 CIZ1 gene expression knockdown using RT-PCR Primer: CIZ1 (m)-PR: sc-142350-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.