

WDSOF1 siRNA (m): sc-155331

BACKGROUND

WDSOF1 (WD repeat and SOF domain-containing protein 1), also known as DCAF13 (DDB1 and CUL4 associated factor 13), is a 445 amino acid protein that belongs to the WD repeat DCAF13/WDSOF1 family. WDSOF1 interacts with DDB1 and may have a role in ribosomal RNA processing. WDSOF1 may also function as a substrate receptor for CUL4-DDB1 E3 ubiquitin-protein ligase complex. Existing as two alternatively spliced isoforms, the WDSOF1 gene is conserved in chimpanzee, cavine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans*, *S. cerevisiae*, *K. lactis*, *S. pombe*, *N. crassa*, *A. thaliana* and rice, and maps to human chromosome 8q22.3. Made up of nearly 146 million bases, chromosome 8 encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder. WRN is a DNA helicase encoded by chromosome 8 and shown defective in those with the early aging disorder Werner syndrome.

REFERENCES

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- McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
- Jin, J., et al. 2006. A family of diverse Cul4-Ddb1-interacting proteins includes Cdt2, which is required for S phase destruction of the replication factor Cdt1. *Mol. Cell* 23: 709-721.
- Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.
- Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. *Proc. Natl. Acad. Sci. USA* 103: 8822-8827.
- Urano, T., et al. 2010. Identification of non-synonymous polymorphisms in the WDSOF1 gene as novel susceptibility markers for low bone mineral density in Japanese postmenopausal women. *Bone* 47: 636-642.

CHROMOSOMAL LOCATION

Genetic locus: Dcaf13 (mouse) mapping to 15 B3.1.

PRODUCT

WDSOF1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see WDSOF1 shRNA Plasmid (m): sc-155331-SH and WDSOF1 shRNA (m) Lentiviral Particles: sc-155331-V as alternate gene silencing products.

For independent verification of WDSOF1 (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-155331A, sc-155331B and sc-155331C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

WDSOF1 siRNA (m) is recommended for the inhibition of WDSOF1 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 μ M in 66 μ l. 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 WDSOF1 gene expression knockdown using RT-PCR Primer: WDSOF1 (m)-PR: sc-155331-PR (20 μ l). 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.