SANTA CRUZ BIOTECHNOLOGY, INC.

DDX40 siRNA (m): sc-142937

BACKGROUND

DEAD-box proteins, characterized by the conserved motif Asp-Glu-Ala-Asp, are putative RNA helicases implicated in several cellular processes involving modifications of RNA secondary structure and ribosome/spliceosome assembly. Based on their distribution patterns, some members of this family may be involved in embryogenesis, spermatogenesis and cellular growth and division. DDX40 (DEAH (Asp-Glu-Ala-His) box polypeptide 40), also known as DHX40, PAD or ARG147, is a 779 amino acid protein that belongs to the DEAD-box family and contains one helicase C-terminal domain and one helicase ATP-binding domain. Expressed ubiquitously, DDX40 exists as multiple alternatively spliced isoforms and is thought to function as an ATP-dependent RNA helicase.

REFERENCES

1. Schmid, S.R., et al. 1992. D-E-A-D protein family of putative RNA helicases. Mol. Microbiol. 6: 283-291.
2. Tanner, N.K., et al. 2001. DExD/H box RNA helicases: from generic motors to specific dissociation functions. Mol. Cell 8: 251-262.
3. Xu, J., et al. 2002. Identification of a novel human DDX40 gene, a new member of the DEAH-box protein family. J. Hum. Genet. 47: 681-683.
4. Abdelhaleem, M., et al. 2003. The human DDX and DHX gene families of putative RNA helicases. Genomics 81: 618-622.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607570. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Cordin, O., et al. 2006. The DEAD-box protein family of RNA helicases. Gene 367: 17-37.
7. Linder, P. 2006. Dead-box proteins: a family affair—active and passive players in RNP-remodeling. Nucleic Acids Res. 34: 4168-4180.

CHROMOSOMAL LOCATION

Genetic locus: Dhx40 (mouse) mapping to 11 C.

PRODUCT

DDX40 siRNA (m) is a target-specific 19-25 nt siRNA 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 DDX40 shRNA Plasmid (m): sc-142937-SH and DDX40 shRNA (m) Lentiviral Particles: sc-142937-V as alternate gene silencing products.

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

DDX40 siRNA (m) is recommended for the inhibition of DDX40 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 DDX40 gene expression knockdown using RT-PCR Primer: DDX40 (m)-PR: sc-142937-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.