SANTA CRUZ BIOTECHNOLOGY, INC.

DDX49 siRNA (m): sc-142941

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. DDX49 (DEAD-box protein 49) is a 483 amino acid protein that contains one helicase ATP-binding domain and one helicase C-terminal domain. One of several members of the DEAD-box protein family, DDX49 may function as a an RNA helicase that is involved in pre-mRNA splicing events.

REFERENCES

1. Maruyama, K., et al. 1994. Oligo-capping: a simple method to replace the cap structure of eukaryotic mRNAs with oligoribonucleotides. Gene 138: 171-174.
2. Andersen, J.S., et al. 2002. Directed proteomic analysis of the human nucleolus. Curr. Biol. 12: 1-11.
3. Abdelhaleem, M., et al. 2003. The human DDX and DHX gene families of putative RNA helicases. Genomics 81: 618-622.
4. Abdelhaleem, M. 2004. Over-expression of RNA helicases in cancer. Anticancer Res. 24: 3951-3953.
5. Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. Clin. Biochem. 38: 499-503.
6. Fachin, A.L., et al. 2007. Gene expression profiles in human lymphocytes irradiated *in vitro* with low doses of γ rays. Radiat. Res. 168: 650-665.

CHROMOSOMAL LOCATION

Genetic locus: Ddx49 (mouse) mapping to 8 B3.3.

PRODUCT

DDX49 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 DDX49 shRNA Plasmid (m): sc-142941-SH and DDX49 shRNA (m) Lentiviral Particles: sc-142941-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.

PROTOCOLS

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

APPLICATIONS

DDX49 siRNA (m) is recommended for the inhibition of DDX49 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.

GENE EXPRESSION MONITORING

DDX49 (C-11): sc-514928 is recommended as a control antibody for monitoring of DDX49 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DDX49 gene expression knockdown using RT-PCR Primer: DDX49 (m)-PR: sc-142941-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.