SANTA CRUZ BIOTECHNOLOGY, INC.

DDX50 siRNA (m): sc-142942

BACKGROUND

DDX50 (Probable ATP-dependent RNA helicase DDX50, Nucleolar protein Gu2, Gu-β) is a 737 amino acid protein encoded by the human gene DDX50. DDX50 belongs to the DEAD box helicase family, DDX21/DDX50 subfamily and contains one helicase ATP-binding domain and one C-terminal helicase domain. DDX50 is a functional interaction partner of c-Jun in human cells. The N-terminal transcription activation region of c-Jun interacts with a C-terminal domain of DDX50. This interaction is stimulated by anisomycin treatment in a manner that is concurrent with, but independent of, c-Jun phosphorylation. DDX50 is also believed to be a probable ATP-dependent RNA helicase. RNA helicases are highly conserved enzymes that utilize the energy derived from NTP hydrolysis to modulate the structure of RNA. RNA helicases participate in all biological processes that involve RNA, including transcription, splicing and translation.

REFERENCES

1. Doorbar, J., et al. 2000. The E1E4 protein of human papillomavirus type 16 associates with a putative RNA helicase through sequences in its C terminus. J. Virol. 74: 10081-10095.
2. Bhattacharya, R., et al. 2002. Methylphosphate cap structure in small RNAs reduces the affinity of RNAs to La protein. Gene Expr. 10: 243-253.
3. Valdez, B.C., et al. 2002. Expression, cellular localization, and enzymatic activities of RNA helicase II/Guβ. Exp. Cell Res. 276: 249-263.
4. Westermarck, J., et al. 2002. The DEXD/H-box RNA helicase RHII/Gu is a co-factor for c-Jun-activated transcription. EMBO J. 21: 451-460.
5. Regard, J.B., et al. 2004. Verge: a novel vascular early response gene. J. Neurosci. 24: 4092-4103.
6. Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. Clin. Biochem. 38: 499-503.
7. Nousiainen, M., et al. 2006. Phosphoproteome analysis of the human mitotic spindle. Proc. Natl. Acad. Sci. USA 103: 5391-5396.

CHROMOSOMAL LOCATION

Genetic locus: Ddx50 (mouse) mapping to 10 B4.

PRODUCT

DDX50 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 DDX50 shRNA Plasmid (m): sc-142942-SH and DDX50 shRNA (m) Lentiviral Particles: sc-142942-V as alternate gene silencing products.

PROTOCOLS

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

DDX50 siRNA (m) is recommended for the inhibition of DDX50 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 DDX50 gene expression knockdown using RT-PCR Primer: DDX50 (m)-PR: sc-142942-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.