SANTA CRUZ BIOTECHNOLOGY, INC.

DDX42 siRNA (m): sc-142939

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 and spliceosome assembly. Based on their distribution patterns, some members of this family may be involved in embryogenesis, spermatogenesis and cellular growth and division. DDX42 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 42), also known as RHELP (RNA-helicase-like protein), RNAHP (RNA helicase-related protein) or SF3B125 (splicing factor 3B-associated 125 kDa protein), is a member of the DEAD-box helicase family of proteins and contains the conserved DEAD motif. Expressed in lung, thymus, muscle, tonsil, liver and pancreatic islets, DDX42 interacts with the SF3B component of the 17S U2 snRNP and is believed to function as an ATP-dependent RNA helicase. Two isoforms exist for DDX42 due to alternative splicing events.

REFERENCES

1. Suk, K., et al. 2000. Identification of a novel human member of the DEAD box protein family. Biochim. Biophys. Acta 1501: 63-69.
2. Will, C.L., et al. 2002. Characterization of novel SF3b and 17S U2 snRNP proteins, including a human Prp5p homologue and an SF3b DEAD-box protein. EMBO J. 21: 4978-4988.
3. Mogass, M., et al. 2004. Genomewide analysis of gene expression associated with Tcof1 in mouse neuroblastoma. Biochem. Biophys. Res. Commun. 325: 124-132.
4. Qian, J., et al. 2004. Transcriptome profiling of marrow mononuclear cells of patients with myelodysplastic syndrome using cDNA microarray analysis. Zhonghua Yi Xue Za Zhi 84: 1260-1264.
5. Qian, J., et al. 2005. Refractory thrombocytopenia, an unusual myelodysplastic syndrome with an initial presentation mimicking idiopathic thrombocytopenic purpura. Int. J. Hematol. 81: 142-147.
6. Qian, J., et al. 2005. Gene expression profiling of the bone marrow mononuclear cells from patients with myelodysplastic syndrome. Oncol. Rep. 14: 1189-1197.

CHROMOSOMAL LOCATION

Genetic locus: Ddx42 (mouse) mapping to 11 E1.

PRODUCT

DDX42 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 DDX42 shRNA Plasmid (m): sc-142939-SH and DDX42 shRNA (m) Lentiviral Particles: sc-142939-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

DDX42 siRNA (m) is recommended for the inhibition of DDX42 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 DDX42 gene expression knockdown using RT-PCR Primer: DDX42 (m)-PR: sc-142939-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.