

Mex3a siRNA (m): sc-149395

BACKGROUND

Mex-3 (muscle excess protein-3) is a translational regulator in *Caenorhabditis elegans* that participates in maintaining the germline totipotency and in specification of posterior blastomeres in early embryos. In humans, four evolutionarily conserved Mex-3 homologs exist, namely Mex3a, Mex3b, Mex3c and Mex3d. These proteins comprise a family of RNA binding phosphoproteins which each contain two tandemly repeated KH (nuclear ribonucleoprotein K homology) domains and one C-terminal RING finger motif. In addition, the Mex-3 homolog family of proteins shuttle between the nucleus and the cytoplasm through the CRM1-dependent export pathway and may play a role regulating post-transcriptional events. Mex3a is a 520 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one RING-type zinc finger and two KH domains through which it functions as an RNA-binding protein.

REFERENCES

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2. Buchet-Poyau, K., Courchet, J., Le Hir, H., Séraphin, B., Scoazec, J.Y., Duret, L., Domon-Dell, C., Freund, J.N. and Billaud, M. 2007. Identification and characterization of human Mex-3 proteins, a novel family of evolutionarily conserved RNA-binding proteins differentially localized to processing bodies. *Nucleic Acids Res.* 35: 1289-1300.
3. Courchet, J., Buchet-Poyau, K., Potemski, A., Brès, A., Jariel-Encontre, I. and Billaud, M. 2008. Interaction with 14-3-3 adaptors regulates the sorting of hMex3b RNA-binding protein to distinct classes of RNA granules. *J. Biol. Chem.* 283: 32131-32142.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 611007. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Mex3a (mouse) mapping to 3 F1.

PRODUCT

Mex3a 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 Mex3a shRNA Plasmid (m): sc-149395-SH and Mex3a shRNA (m) Lentiviral Particles: sc-149395-V as alternate gene silencing products.

For independent verification of Mex3a (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-149395A, sc-149395B and sc-149395C.

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 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

Mex3a siRNA (m) is recommended for the inhibition of Mex3a 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 Mex3a gene expression knockdown using RT-PCR Primer: Mex3a (m)-PR: sc-149395-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.