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Mex3d siRNA (h): sc-97604

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The Power to Question

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 posttranscriptional events. Mex3d (Mex-3 homolog d), also known as MEX3, TINO, RKHD1 (RING finger and KH domain-containing protein 1) or RNF193 (RING finger protein 193), is a ubiquitously expressed protein. Due to alternative splicing events truncating the N-terminus, a variant form of Mex3d exists, which is known as TINO.

REFERENCES

1. Draper, B.W., Mello, C.C., Bowerman, B., Hardin, J. and Priess, J.R. 1996. Mex-3 is a KH domain protein that regulates blastomere identity in early *C. elegans* embryos. Cell 87: 205-216.
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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611009. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Donnini, M., Lapucci, A., Papucci, L., Witort, E., Jacquier, A., Brewer, G., Nicolin, A., Capaccioli, S. and Schiavone, N. 2004. Identification of TINO: a new evolutionarily conserved Bcl-2 AU-rich element RNA-binding protein. J. Biol. Chem. 279: 20154-20166.
5. 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 Mex3 proteins, a novel family of evolutionarily conserved RNA-binding proteins differentially localized to processing bodies. Nucleic Acids Res. 35: 1289-1300.

CHROMOSOMAL LOCATION

Genetic locus: MEX3D (human) mapping to 19p13.3.

PRODUCT

Mex3d siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Mex3d shRNA Plasmid (h): sc-97604-SH and Mex3d shRNA (h) Lentiviral Particles: sc-97604-V as alternate gene silencing products.

For independent verification of Mex3d (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-97604A, sc-97604B and sc-97604C.

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

Mex3d siRNA (h) is recommended for the inhibition of Mex3d expression in human 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

Mex3d (H-3): sc-514739 is recommended as a control antibody for monitoring of Mex3d 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Mex3d gene expression knockdown using RT-PCR Primer: Mex3d (h)-PR: sc-97604-PR (20 µl, 392 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Shao, L., Wang, J., Karatas, O. and Ittmann, M. 2021. Mex3d is an oncogenic driver in prostate cancer. Prostate 81: 1202-1213.

RESEARCH USE

For research use only, not for use in diagnostic procedures.