SANTA CRUZ BIOTECHNOLOGY, INC.

dendrin siRNA (m): sc-142994

BACKGROUND

Synaptic plasticity and memory formation involve remodeling of the postsynaptic cytoskeleton, a process that is in part based on both local translation of dendritic mRNAs and synaptic recruitment of newly synthesized proteins. Dendrin, a 711 amino acid protein, is thought to modulate the structure of the synaptic cytoskeleton by interacting with various proteins, including α-actinin, Maguk with inverted orientation (MAGI) and synaptic scaffolding molecule (S-SCAM). Dendrin is specifically expressed in brain and kidney. In kidney, Dendrin promotes apoptosis of kidney glomerular podocytes, which are highly specialized cells essential to the ultrafiltration of blood, resulting in the extraction of urine and the retention of protein.

REFERENCES

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2. Herb, A., et al. 1997. Prominent dendritic localization in forebrain neurons of a novel mRNA and its product, dendrin. Mol. Cell. Neurosci. 8: 367-374.
3. Kawata, A., et al. 2006. CIN85 is localized at synapses and forms a complex with S-SCAM via dendrin. J. Biochem. 139: 931-939.
4. Kremerskothen, J., et al. 2006. Postsynaptic recruitment of Dendrin depends on both dendritic mRNA transport and synaptic anchoring. J. Neurochem. 96: 1659-1666.
5. Asanuma, K., et al. 2007. Nuclear relocation of the nephrin and CD2AP-binding protein dendrin promotes apoptosis of podocytes. Proc. Natl. Acad. Sci. USA 104: 10134-10139.
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7. Dunér, F., et al. 2008. Dendrin expression in glomerulogenesis and in human minimal change nephrotic syndrome. Nephrol. Dial. Transplant. 23: 2504-2511.

CHROMOSOMAL LOCATION

Genetic locus: Ddn (mouse) mapping to 15 F1.

PRODUCT

dendrin 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 dendrin shRNA Plasmid (m): sc-142994-SH and dendrin shRNA (m) Lentiviral Particles: sc-142994-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

dendrin siRNA (m) is recommended for the inhibition of dendrin 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 dendrin gene expression knockdown using RT-PCR Primer: dendrin (m)-PR: sc-142994-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.