SANTA CRUZ BIOTECHNOLOGY, INC.

calmin siRNA (m): sc-141981

BACKGROUND

Calmin, also known as Calponin-like transmembrane domain protein, is a 1,002 amino acid single-pass type IV membrane protein that is highly expressed in neuronal cell bodies of the cerebellum, hippocampus and olfactory bulb, as well as in testis. In vitamin A-deficient rat embryos, calmin mRNA is significantly down-regulated in the neuroepithelium near the somites, suggesting that calmin is sensitive to retinoid status within the nervous system. With two Calponin homology domains, calmin likely binds actin and influences cellular structure and/or signaling transduction processes. The gene encoding calmin maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome.

REFERENCES

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5. Takaishi, M., et al. 2003. Expression of calmin, a novel developmentally regulated brain protein with calponin-homology domains. Brain Res. Mol. Brain Res. 112: 146-152.
6. Merrill, R.A., et al. 2004. All-*trans* retinoic acid-responsive genes identified in the human SH-SY5Y neuroblastoma cell line and their regulated expression in the nervous system of early embryos. Biol. Chem. 385: 605-614.
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8. Marzinke, M.A., et al. 2010. Calmin expression in embryos and the adult brain, and its regulation by all-*trans* retinoic acid. Dev. Dyn. 239: 610-619.
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CHROMOSOMAL LOCATION

Genetic locus: Clmn (mouse) mapping to 12 E.

PRODUCT

calmin 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see calmin shRNA Plasmid (m): sc-141981-SH and calmin shRNA (m) Lentiviral Particles: sc-141981-V as alternate gene silencing products.

For independent verification of calmin (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-141981A, sc-141981B and sc-141981C.

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

calmin siRNA (m) is recommended for the inhibition of calmin 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 calmin gene expression knockdown using RT-PCR Primer: calmin (m)-PR: sc-141981-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.

PROTOCOLS

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