SANTA CRUZ BIOTECHNOLOGY, INC.

CASKIN1 siRNA (h): sc-93195

BACKGROUND

CASK is a mulit-domain scaffolding protein that is thought to be involved in signaling at neuronal synapses. CASKIN1 (CASK-interacting protein 1) is a 1,431 amino acid cytoplasmic protein that links CASK to downstream intracellular effectors. CASKIN1 contains six ANK repeats, two SAM (sterile α motif) domains and one SH3 domain. By binding the CaM kinase domain of CASK, CASKIN1 forms a ternary complex with CASK and a Veli protein, either 1, 2 or 3. This triparte binds to the C-terminus of neurexin I, a neuronal cell surface protein involved in cell recognition and adhesion. X11α, a CNS-specific protein that may be involved in the processing of the β-amyloid precursor protein, also binds the CASK and LIN7 complex and therefore is a competes with CASKIN1 for CASK binding.

REFERENCES

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2. Wang, G.S., et al. 2004. Transcriptional modification by a CASK-interacting nucleosome assembly protein. Neuron 42: 113-128.
3. Boehm, D., et al. 2007. Gross genomic rearrangement involving the TSC2-PKD1 contiguous deletion syndrome: characterization of the deletion event by quantitative polymerase chain reaction deletion assay. Am. J. Kidney Dis. 49: e11-e21.
4. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612184. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Bailey, K.A. and Aldinger, K.A. 2009. An X-linked microcephaly syndrome caused by disruptions of CASK implicates the CASK-TBR1-RELN pathway in human brain development. Clin. Genet. 75: 424-425.
6. Balázs, A., et al. 2009. High levels of structural disorder in scaffold proteins as exemplified by a novel neuronal protein, CASK-interactive protein1. FEBS J. 276: 3744-3756.

CHROMOSOMAL LOCATION

Genetic locus: CASKIN1 (human) mapping to 16p13.3.

PRODUCT

CASKIN1 siRNA (h) is a pool of 2 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 CASKIN1 shRNA Plasmid (h): sc-93195-SH and CASKIN1 shRNA (h) Lentiviral Particles: sc-93195-V as alternate gene silencing products.

For independent verification of CASKIN1 (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-93195A and sc-93195B.

RESEARCH USE

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

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

CASKIN1 siRNA (h) is recommended for the inhibition of CASKIN1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CASKIN1 gene expression knockdown using RT-PCR Primer: CASKIN1 (h)-PR: sc-93195-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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