SANTA CRUZ BIOTECHNOLOGY, INC.

SHISA9 siRNA (m): sc-108816

BACKGROUND

SHISA9 (shisa homolog 9), also known as CKAMP44, is a 424 amino acid single-pass type I membrane protein that belongs to the shisa family and the SHISA9 subfamily. The SHISA9 protein has a single transmembrane domain and an intracellular PDZ motif. Additionally the extracellular domain of SHISA9 has a cysteine-rich region. As a regulator of short-term neuronal synaptic plasticity in the dentate gyrus, the SHISA9 protein associates with AMPA receptors (ionotropic glutamate receptors) in synaptic spines and promotes AMPA receptor desensitization at excitatory synapses. AMPA receptors complexes are composed of at least one AMPA receptor (GluR-1, GluR-2 and/or GluR-3), L-type Ca^{++} CP γ2 and SHISA9, as well as low levels of PSD-95. Existing as three alternatively spliced isoforms and containing five coding exons, the SHISA9 gene is conserved in chimpanzee, mouse, chicken and zebrafish, and maps to chromosome 16 in both mouse and humans.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Shisa9 (mouse) mapping to 16 A1.

RESEARCH USE

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

PRODUCT

SHISA9 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 SHISA9 shRNA Plasmid (m): sc-108816-SH and SHISA9 shRNA (m) Lentiviral Particles: sc-108816-V as alternate gene silencing products.

For independent verification of SHISA9 (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-108816A, sc-108816B and sc-108816C.

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

SHISA9 siRNA (m) is recommended for the inhibition of SHISA9 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 SHISA9 gene expression knockdown using RT-PCR Primer: SHISA9 (m)-PR: sc-108816-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.