SANTA CRUZ BIOTECHNOLOGY, INC.

PSD-93 siRNA (m): sc-36322

BACKGROUND

The postsynaptic density protein (PSD)-93 and related membrane associated guanylate kinase (MAGUK) proteins assemble signal transduction complexes at sites of cell-cell contact including synapses. PSD-93 (also designated channel associated protein of synapse-110 or chapsyn-110) occurs only at postsynaptic sites in hippocampal neurons. PSD-95 and PSD-93 mediate ion channel clustering in heterologous cells and are believed to cluster and anchor NMDA receptors at the synapse. The glutamate receptor subunit, delta2, binds specifically to PSD-93, which is enriched in Purkinje neuron cell bodies and dendrites. In addition, PSD-93 clusters delta2 when they are coexpressed and they are colocalized at parallel fiber synapses.

REFERENCES

1. Brenman, J.E., et al. 1996. Cloning and characterization of postsynaptic density 93, a nitric oxide synthase interacting protein. J. Neurosci. 16: 7407-7415.
2. Fukaya, M., et al. 1999. Distinct spatiotemporal expression of mRNAs for the PSD-95/SAP90 protein family in the mouse brain. Neurosci. Res. 33: 111-118.
3. Roche, K.W., et al. 1999. Postsynaptic density-93 interacts with the δ2 glutamate receptor subunit at parallel fiber synapses. J. Neurosci. 19: 3926-3934.
4. El-Husseini, A.E., et al. 2000. Ion channel clustering by membrane associated guanylate kinases: differential regulation by N-terminal lipid and metal binding motifs. J. Biol. Chem. 275: 23904-23910.
5. Sans, N., et al. 2000. A developmental change in NMDA receptor-associated proteins at hippocampalsynapses. J. Neurosci. 20: 1260-1271.

CHROMOSOMAL LOCATION

Genetic locus: Dlg2 (mouse) mapping to 7 E1.

PRODUCT

PSD-93 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 PSD-93 shRNA Plasmid (m): sc-36322-SH and PSD-93 shRNA (m) Lentiviral Particles: sc-36322-V as alternate gene silencing products.

For independent verification of PSD-93 (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-36322A, sc-36322B and sc-36322C.

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.

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

PSD-93 siRNA (m) is recommended for the inhibition of PSD-93 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 PSD-93 gene expression knockdown using RT-PCR Primer: PSD-93 (m)-PR: sc-36322-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.