SANTA CRUZ BIOTECHNOLOGY, INC.

PRR7 siRNA (h): sc-91906

BACKGROUND

PRR7 (proline rich 7), also known as synaptic proline-rich membrane protein, is a 269 amino acid protein expressed in postsynaptic density (PSD) of the forebrain, especially in hippocampus. The proline rich sequence for which the protein is named is characteristic of a region that is involved in protein-protein interactions, acting as a ligand for SH3, WW and EVH1 domains. As a single-pass type III membrane protein, evidence shows that PRR7 forms a postsynaptic membrane complex with PSD-95 and NMDAz1, suggesting its possible function in the modulation of neural activities. The expression pattern in brain also suggests that PRR7 is essential for synaptic formation or maturation, specifically in the cerebrum. Two isoforms of PRR7 exist as a result of an alternative splicing event.

REFERENCES

1. Williamson, M.P. 1994. The structure and function of proline-rich regions in proteins. Biochem. J. 297: 249-260.
2. Kay, B.K., Williamson, M.P. and Sudol, M. 2000. The importance of being proline: the interaction of proline-rich motifs in signaling proteins with their cognate domains. FASEB J. 14: 231-241.
3. Lim, I.A., Merrill, M.A., Chen, Y. and Hell, J.W. 2003. Disruption of the NMDA receptor-PSD-95 interaction in hippocampal neurons with no obvious physiological short-term effect. Neuropharmacology 45: 738-754.
4. Murata, Y., Doi, T., Taniguchi, H. and Fujiyoshi, Y. 2005. Proteomic analysis revealed a novel synaptic proline-rich membrane protein (PRR7) associated with PSD-95 and NMDA receptor. Biochem. Biophys. Res. Commun. 327: 183-191.

CHROMOSOMAL LOCATION

Genetic locus: PRR7 (human) mapping to 5q35.3.

PRODUCT

PRR7 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 PRR7 shRNA Plasmid (h): sc-91906-SH and PRR7 shRNA (h) Lentiviral Particles: sc-91906-V as alternate gene silencing products.

For independent verification of PRR7 (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-91906A and sc-91906B.

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

PRR7 siRNA (h) is recommended for the inhibition of PRR7 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 PRR7 gene expression knockdown using RT-PCR Primer: PRR7 (h)-PR: sc-91906-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.