SANTA CRUZ BIOTECHNOLOGY, INC.

PRiMA siRNA (h): sc-92103

BACKGROUND

PRiMA, also known as PRIMA1 (proline rich membrane anchor 1), is a 153 amino acid single-pass type I membrane protein that localizes to the synapse of cell junctions. PRiMA contains one proline-rich attachment domain (PRAD), through which it binds the catalytic subunits of acetylcholinesterase (AChE). PRiMA anchors AChE to the basal lamina of neuromuscular junctions and membrane of neuronal synapses in brain, and organizes AChE into tetramers. Existing as two alternatively spliced isoforms, PRiMA is expressed predominantly in the cholinergic system. PRiMA is encoded by a gene mapping to human chromosome 14q32.12 and mouse chromosome 12 E.

REFERENCES

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2. Perrier, N.A., Kherif, S., Perrier, A.L., Dumas, S., Mallet, J. and Massoulie, J. 2003. Expression of PRiMA in the mouse brain: membrane anchoring and accumulation of "tailed" acetylcholinesterase. Eur. J. Neurosci. 18: 1837-1847.
3. Xie, H.Q., Siow, N.L., Peng, H.B., Massoulie, J. and Tsim, K.W. 2005. Regulation of PRiMA: membrane anchor of acetylcholinesterase (AChE) in neuron and muscle. Chem. Biol. Interact. 157-158: 432.
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5. Xie, H.Q., Choi, R.C., Leung, K.W., Chen, V.P., Chu, G.K. and Tsim, K.W. 2009. Transcriptional regulation of proline-rich membrane anchor (PRiMA) of globular form acetylcholinesterase in neuron: an inductive effect of neuron differentiation. Brain Res. 1265: 13-23.
6. Leung, K.W., Xie, H.Q., Chen, V.P., Mok, M.K., Chu, G.K., Choi, R.C. and Tsim, K.W. 2009. Restricted localization of proline-rich membrane anchor (PRiMA) of globular form acetylcholinesterase at the neuromuscular junctions—contribution and expression from motor neurons. FEBS J. 276: 3031-3042.

CHROMOSOMAL LOCATION

Genetic locus: PRIMA1 (human) mapping to 14q32.12.

PRODUCT

PRiMA siRNA (h) 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 PRiMA shRNA Plasmid (h): sc-92103-SH and PRiMA shRNA (h) Lentiviral Particles: sc-92103-V as alternate gene silencing products.

For independent verification of PRiMA (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-92103A, sc-92103B and sc-92103C.

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

PRiMA siRNA (h) is recommended for the inhibition of PRiMA 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 PRiMA gene expression knockdown using RT-PCR Primer: PRiMA (h)-PR: sc-92103-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.