SANTA CRUZ BIOTECHNOLOGY, INC.

PLSCR4 siRNA (m): sc-62831

BACKGROUND

The calcium-dependent plasma membrane protein PLSCR4 (phospholipid scramblase 4), also known as PLS4, TRA1 or cell growth inhibiting protein 43, is a 329 amino acid member of the phospholipid scramblase (PLS) family. The PLS family consists of membrane-bound enzymes that participate in the bi-directional movement of phospholipids. PLSCR4 is expressed in a wide variety of tissues including brain (unlike other PLS family members) but it is not found in peripheral blood lymphocytes. It contains an N-terminal proline-rich region with several PxxP motifs and a calcium-binding domain at its C-terminus. PLSCR4 shares 46% identity with PLSCR1.

REFERENCES

1. Wiedmer, T., et al. 2000. Identification of three new members of the phospholipid scramblase gene family. Biochim. Biophys. Acta 1467: 244-253.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607612. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Wiedmer, T., et al. 2004. Adiposity, dyslipidemia, and Insulin resistance in mice with targeted deletion of phospholipid scramblase 3 (PLSCR3). Proc. Natl. Acad. Sci. USA 101: 13296-13301.
4. Chen, M.H., et al. 2005. Phospholipid scramblase 1 contains a nonclassical nuclear localization signal with unique binding site in importin α. J. Biol. Chem. 280: 10599-10606.
5. Phillippe, M., et al. 2006. Phospholipid scramblase isoform expression in pregnant rat uterus. J. Soc. Gynecol. Investig. 13: 497-501.
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7. Lu, B., et al. 2007. Expression of the phospholipid scramblase (PLSCR) gene family during the acute phase response. Biochim. Biophys. Acta 1771: 1177-1185.
8. Kim, S., et al. 2007. Suicide candidate genes associated with bipolar disorder and schizophrenia: an exploratory gene expression profiling analysis of post-mortem prefrontal cortex. BMC Genomics 8: 413-413.

CHROMOSOMAL LOCATION

Genetic locus: Plscr4 (mouse) mapping to 9 E3.3.

PRODUCT

PLSCR4 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 PLSCR4 shRNA Plasmid (m): sc-62831-SH and PLSCR4 shRNA (m) Lentiviral Particles: sc-62831-V as alternate gene silencing products.

For independent verification of PLSCR4 (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-62831A, sc-62831B and sc-62831C.

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

PLSCR4 siRNA (m) is recommended for the inhibition of PLSCR4 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 PLSCR4 gene expression knockdown using RT-PCR Primer: PLSCR4 (m)-PR: sc-62831-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.