SANTA CRUZ BIOTECHNOLOGY, INC.

Punctin-2 siRNA (h): sc-76299

BACKGROUND

Punctin-2, also known as ADAMTSL3 (ADAMTS-like 3) or KIAA1233, is a 1,691 amino acid protein that localizes to the extracellular matrix and contains one PLAC domain, three Ig-like C2 domains and ten TSP type-1 domains. Expressed in a variety of tissues with highest expression in heart, kidney, liver and skeletal muscle, Punctin-2 is thought to play a role in cell-matrix interactions and, when mutated, may be involved in the pathogenesis of colon cancer. The gene encoding Punctin-2 maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

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2. Porter, S., et al. 2005. The ADAMTS metalloproteinases. Biochem. J. 386: 15-27.
3. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609199. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Cachón-González, M.B., et al. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. Proc. Natl. Acad. Sci. USA 103: 10373-10378.
5. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. Nature 440: 671-675.
6. Diene, G., et al. 2007. The Prader-Willi syndrome. Ann. Endocrinol. 68: 129-137.
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CHROMOSOMAL LOCATION

Genetic locus: ADAMTSL3 (human) mapping to 15q25.2.

PRODUCT

Punctin-2 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 Punctin-2 shRNA Plasmid (h): sc-76299-SH and Punctin-2 shRNA (h) Lentiviral Particles: sc-76299-V as alternate gene silencing products.

For independent verification of Punctin-2 (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-76299A, sc-76299B and sc-76299C.

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

Punctin-2 siRNA (h) is recommended for the inhibition of Punctin-2 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 Punctin-2 gene expression knockdown using RT-PCR Primer: Punctin-2 (h)-PR: sc-76299-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.