SANTA CRUZ BIOTECHNOLOGY, INC.

Polyserase-2 siRNA (h): sc-76197

BACKGROUND

Polyserase-2, also known as PRSS36, is an 855 amino acid secreted protein that localizes to the extracellular space and contains 3 peptidase S1 domains. Expressed in heart, liver, placenta, skeletal muscle and fetal kidney, Polyserase-2 functions as a serine protease that preferentially hydrolyzes the peptides N-t-Boc-Gln-Ala-Arg-AMC and N-t-Boc-Gln-Gly-Arg-AMC and is inhibited by 4-(2-aminoethyl)-benzenesulfonyl fluoride. Polyserase-2 is subject to post-translational N-glycosylation and is expressed in lung and colon adenocarcinomas, suggesting a role in tumor formation. The gene encoding Polyserase-2 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

1. Cal, S., et al. 2005. Human polyserase-2, a novel enzyme with three tandem serine protease domains in a single polypeptide chain. J. Biol. Chem. 280: 1953-1961.
2. Oh, J.H., et al. 2005. Transcriptome analysis of human gastric cancer. Mamm. Genome 16: 942-954.
3. Cal, S., et al. 2006. Identification and characterization of human polyserase-3, a novel protein with tandem serine-protease domains in the same polypeptide chain. BMC Biochem. 7: 9.
4. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610560. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Cal, S., et al. 2007. Expanding the complexity of the human degradome: polyserases and their tandem serine protease domains. Front. Biosci. 12: 4661-4669.

CHROMOSOMAL LOCATION

Genetic locus: PRSS36 (human) mapping to 16p11.2.

PRODUCT

Polyserase-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 Polyserase-2 shRNA Plasmid (h): sc-76197-SH and Polyserase-2 shRNA (h) Lentiviral Particles: sc-76197-V as alternate gene silencing products.

For independent verification of Polyserase-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-76197A, sc-76197B and sc-76197C.

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

Polyserase-2 siRNA (h) is recommended for the inhibition of Polyserase-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 Polyserase-2 gene expression knockdown using RT-PCR Primer: Polyserase-2 (h)-PR: sc-76197-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.