SANTA CRUZ BIOTECHNOLOGY, INC.

ART5 siRNA (h): sc-96786

BACKGROUND

Mono-ADP-ribosylation is one of the posttranslational protein modifications regulating cellular metabolism (e.g. nitrogen fixation) in prokaryotes. Mono-ADP-ribosylation is a process in which the ADP-ribose moiety of nicotinamide adenine dinucleotide is transferred to an acceptor amino acid. Five mammalian ADP-ribosyltransferases (ART1-ART5) have been cloned, and each ART is expressed in different tissues. ART5 (ADP-ribosyltransferase 5), also known as Ecto-ADP-ribosyltransferase 5, is a 292 amino acid secretory protein that is expressed in testis, heart, skeletal muscle and lymphoma. Functionally, ART5 is implicatetd to play a role in cell signaling and metabolism cascades. Two isoforms of ART5 exist as a result of alternative splicing events.

REFERENCES

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4. Seman, M., et al. 2004. Ecto-ADP-ribosyltransferases (ARTs): emerging actors in cell communication and signaling. Curr. Med. Chem. 11: 857-872.
5. Koch-Nolte, F., et al. 2005. Use of genetic immunization to raise antibodies recognizing toxin-related cell surface ADP-ribosyltransferases in native conformation. Cell. Immunol. 236: 66-71.
6. Friedrich, M., et al. 2006. Genomic organization and expression of the human mono-ADP-ribosyltransferase ART3 gene. Biochim. Biophys. Acta 1759: 270-280.
7. Friedrich, M., et al. 2006. Expression of toxin-related human mono-ADP-ribosyltransferase 3 in human testes. Asian J. Androl. 8: 281-287.
8. Muller, O., et al. 2007. Identification of corticosteroid-regulated genes in cardiomyocytes by serial analysis of gene expression. Genomics 89: 370-377.

CHROMOSOMAL LOCATION

Genetic locus: ART5 (human) mapping to 11p15.4.

PRODUCT

ART5 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 ART5 shRNA Plasmid (h): sc-96786-SH and ART5 shRNA (h) Lentiviral Particles: sc-96786-V as alternate gene silencing products.

For independent verification of ART5 (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-96786A, sc-96786B and sc-96786C.

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

ART5 siRNA (h) is recommended for the inhibition of ART5 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 ART5 gene expression knockdown using RT-PCR Primer: ART5 (h)-PR: sc-96786-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.