SANTA CRUZ BIOTECHNOLOGY, INC.

# allantoicase siRNA (m): sc-141026

## BACKGROUND

Allantoicase is an enzyme involved in the uric acid degradation pathway of invertebrates, fish and amphibians. In mammals, since the uric degradation pathway ends in the formation of allantonin, it is likely that the enzymatic activity of allantoicase was lost during the colonization of terrestrial environment by vertebrates. Though mRNA of allantoicase has been identified in mice and humans, the protein is either untranslated or non-functional. Human allantoicase, also known as Allantoate amidinohydrolase, is a 410 amino acid protein that has only been identified in testis. The function of this enzyme is unclear, as allantoicase activity is not known to exist in mammals. There are four isoforms of Allantoicase that are produced as a result of alternative splicing events.

## REFERENCES


1. Noguchi, T., et al. 1979. Degradation of uric acid to urea and glyoxylate in peroxisomes. J. Biol. Chem. 254: 5272-5275.
2. Vigetti, D., et al. 2000. *Xenopus* allantoicase: molecular cloning, enzymatic activity and developmental expression. Arch. Biochem. Biophys. 379: 90-96.
3. Vigetti, D., et al. 2000. Human allantoicase gene: cDNA cloning, genomic organization and chromosome localization. Gene 256: 253-260.
4. Vigetti, D., et al. 2001. Molecular cloning of mouse allantoicase cDNA. Biochim. Biophys. Acta 1519: 117-121.
5. Vigetti, D., et al. 2002. Genomic organization and chromosome localization of the murine and human allantoicase gene. Gene 289: 13-17.
6. Vigetti, D., et al. 2003. Selective pressure on the allantoicase gene during vertebrate evolution. J. Mol. Evol. 57: 650-658.
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## CHROMOSOMAL LOCATION

Genetic locus: Allc (mouse) mapping to 12 A2.

## PRODUCT

allantoicase 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 allantoicase shRNA Plasmid (m): sc-141026-SH and allantoicase shRNA (m) Lentiviral Particles: sc-141026-V as alternate gene silencing products.

For independent verification of allantoicase (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-141026A, sc-141026B and sc-141026C.

## 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

allantoicase siRNA (m) is recommended for the inhibition of allantoicase 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 allantoicase gene expression knockdown using RT-PCR Primer: allantoicase (m)-PR: sc-141026-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.