SANTA CRUZ BIOTECHNOLOGY, INC.

# CD39L3 siRNA (m): sc-142199

## BACKGROUND

Members of the ecto-nucleoside triphosphate diphosphohydrolase (eNTPDase) protein family are glycosylated enzymes that hydrolyze nucleoside 5'-triphosphates and 5'-diphosphates in extracellcular space. The enzymatic activities of eNTPDase are dependent on cations such as magnesium and calcium. Members of this protein family differ in their affinities for triphosphates versus diphosphates as substrate material. CD39L3, also known as Ectonucleoside triphosphate diphosphohydrolase 3 or NTPDase 3, is a 529 amino acid multipass membrane protein that has a three-fold preference for hydrolysis of ATP over ADP. Both calcium and magnesium serve as cofactors for CD39L3's extremely active extracellular nucleotide hydrolysis site. CD39L3 is expressed in spleen, prostate, brain and pancreas, though moderate to low expression is observed in most tissues, with the exception of liver and peripheral blood leukocytes.

## REFERENCES


1. Smith, T.M., et al. 1998. Cloning, sequencing, and expression of a human brain ecto-apyrase related to both the ecto-ATPases and CD39 ecto-apyrases1. Biochim. Biophys. Acta 1386: 65-78.
2. Chadwick, B.P., et al. 1998. The CD39-like gene family: identification of three new human members (CD39L2, CD39L3, and CD39L4), their murine homologues, and a member of the gene family from *Drosophila melanogaster*. Genomics 50: 357-367.
3. Smith, T.M., et al. 1999. Mutagenesis of two conserved tryptophan residues of the E-type ATPases: inactivation and conversion of an ecto-apyrase to an ecto-NTPase. Biochemistry 38: 5849-5857.
4. Yeung, G., et al. 2000. CD39L2, a gene encoding a human nucleoside diphosphatase, predominantly expressed in the heart. Biochemistry 39: 12916-12923.
5. Yang, F., et al. 2001. Site-directed mutagenesis of human nucleoside triphosphate diphosphohydrolase 3: the importance of residues in the apyrase conserved regions. Biochemistry 40: 3943-3950.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603161. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/


## CHROMOSOMAL LOCATION

Genetic locus: Entpd3 (mouse) mapping to 9 F4.

## PRODUCT

CD39L3 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 CD39L3 shRNA Plasmid (m): sc-142199-SH and CD39L3 shRNA (m) Lentiviral Particles: sc-142199-V as alternate gene silencing products.

For independent verification of CD39L3 (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-142199A, sc-142199B and sc-142199C.

## 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

CD39L3 siRNA (m) is recommended for the inhibition of CD39L3 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 CD39L3 gene expression knockdown using RT-PCR Primer: CD39L3 (m)-PR: sc-142199-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.