SANTA CRUZ BIOTECHNOLOGY, INC.

CD39L1 siRNA (m): sc-142197

BACKGROUND

CD39, also known as ectonucleoside triphosphate diphosphohydrolase 1 (ENP1), is an integral membrane glycoprotein that acts as an extracellular nucleotide-hydrolyzing enzyme. CD39 inhibits ADP-induced platelet aggregation by hydrolyzing ADP to AMP and ultimately generating adenosine. Intracellular CD39 undergoes glycosylation at 6 N-glycosylation sites and translocates to the membrane in order to be an active enzyme. CD39L1 (CD39 antigen-like 1), also known as ENTPD2 (ectonucleoside triphosphate diphosphohydrolase 2), is a 495 amino acid multi-pass membrane protein that requires calcium and magnesium cofactors to hydrolyze ATP and other nucleotides in the regulation of purigenic neurotransmission. CD39L1 is expressed in kidney, colon, heart, testis, pancreas, brain, prostate, skeletal muscle, small intestine and ovaries. There are two isoforms of CD39L1 that are produced as a result of alternative splicing events.

REFERENCES

1. Grinthal, A., et al. 2002. Transmembrane domains confer different substrate specificities and adenosine diphosphate hydrolysis mechanisms on CD39, CD39L1, and chimeras. Biochemistry 41: 1947-1956.
2. Dranoff, J.A., et al. 2002. The ecto-nucleoside triphosphate diphosphohydrolase NTPDase2/CD39L1 is expressed in a novel functional compartment within the liver. Hepatology 36: 1135-1144.
3. Vlajkovic, S.M., et al. 2002. NTPDase1 and NTPDase2 immunolocalization in mouse cochlea: implications for regulation of p2 receptor signaling. J. Histochem. Cytochem. 50: 1435-1442.
4. Robson, S.C., et al. 2005. Ectonucleotidases of CD39 family modulate vascular inflammation and thrombosis in transplantation. Semin. Thromb. Hemost. 31: 217-233.
5. Wink, M.R., et al. 2006. Nucleoside triphosphate diphosphohydrolase-2 (NTPDase2/CD39L1) is the dominant ectonucleotidase expressed by rat astrocytes. Neuroscience 138: 421-432.

CHROMOSOMAL LOCATION

Genetic locus: Entpd2 (mouse) mapping to 2 A3.

PRODUCT

CD39L1 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 CD39L1 shRNA Plasmid (m): sc-142197-SH and CD39L1 shRNA (m) Lentiviral Particles: sc-142197-V as alternate gene silencing products.

For independent verification of CD39L1 (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-142197A, sc-142197B and sc-142197C.

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

CD39L1 siRNA (m) is recommended for the inhibition of CD39L1 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 CD39L1 gene expression knockdown using RT-PCR Primer: CD39L1 (m)-PR: sc-142197-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.