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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

NTPDase8 siRNA (m): sc-150087

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. NTPDase8, also known as ENTPD8 (ectonucleoside triphosphate diphosphohydrolase 8) or E-NTPDase 8, is a 495 amino acid multi-pass membrane protein belonging to the GDA1/CD39 NTPase family. As a canalicular ectonucleoside NTPDase, NTPDase8 is involved in hepatic NTPDase activity and helps concentrate extracellular nucleotides. NTPDase8 binds calcium as a cofactor, becomes glycosylated following translation and exists as two alternatively spliced isoforms.

REFERENCES

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2. Knowles, A.F. and Li, C. 2006. Molecular cloning and characterization of expressed human ecto-nucleoside triphosphate diphosphohydrolase 8 (E-NTPDase 8) and its soluble extracellular domain. Biochemistry 45: 7323-7333.
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4. Fausther, M., Lecka, J., Kukulski, F., Levesque, S.A., Pelletier, J., Zimmermann, H., Dranoff, J.A. and Sevigny, J. 2007. Cloning, purification, and identification of the liver canalicular ecto-ATPase as NTPDase8. Am. J. Physiol. Gastrointest. Liver Physiol. 292: G785-G795.
5. Munkonda, M.N., Kauffenstein, G., Kukulski, F., Levesque, S.A., Legendre, C., Pelletier, J., Lavoie, E.G., Lecka, J. and Sevigny, J. 2007. Inhibition of human and mouse plasma membrane bound NTPDases by P2 receptor antagonists. Biochem. Pharmacol. 74: 1524-1534.

CHROMOSOMAL LOCATION

Genetic locus: Entpd8 (mouse) mapping to 2 A3.

PRODUCT

NTPDase8 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 NTPDase8 shRNA Plasmid (m): sc-150087-SH and NTPDase8 shRNA (m) Lentiviral Particles: sc-150087-V as alternate gene silencing products.

For independent verification of NTPDase8 (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-150087A, sc-150087B and sc-150087C.

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

NTPDase8 siRNA (m) is recommended for the inhibition of NTPDase8 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 NTPDase8 gene expression knockdown using RT-PCR Primer: NTPDase8 (m)-PR: sc-150087-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.