SANTA CRUZ BIOTECHNOLOGY, INC.

ENT2 siRNA (m): sc-60586

BACKGROUND

Equilibrative nucleoside transporters (ENTs) regulate many physiological processes and are widely distributed in mammals, plants, yeasts, insects, nematodes and protozoans. They enable facilitated diffusion of hydrophilic nucleosides, such as adenosine and nucleoside analogs, across cell membranes. ENTs are required for uptake of antiviral and anticancer nucleoside drugs and influence a variety of physiological processes, such as neurotransmission and platelet aggregation, by regulating the amount of adenoside available to cell surface receptors. Equilibrative nucleoside transporter 2 (ENT2), also designated solute carrier family 29 (nucleoside transporters), member 2, belongs to the SLC29A transporter family and is a mammalian ENT isoform. ENT2 mediates the equilibrative transport of hypoxanthine in addition to nucleosides and is purine-selective.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602193. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Leung, G.P., et al. 2005. Effect of thiazolidinediones on equilibrative nucleoside transporter-1 in human aortic smooth muscle cells. Biochem. Pharmacol. 70: 355-362.
3. Takagaki, K., et al. 2005. Gene-expression profiling reveals downregulation of transporter 1 (ENT1) in Ara-C-resistant CCRF-CEM-derived cells. J. Biochem. 136: 733-740.
4. Sarkar, M., et al. 2005. Cytosine arabinoside affects multiple cellular factors and induces drug resistance in human lymphoid cells. Biochem. Pharmacol. 70: 426-432.
5. Sakowicz, M., et al. 2005. Differential effect of Insulin and elevated glucose level on adenosine transport in rat B lymphocytes. Int. Immunol. 17: 145-154.
6. Kato, R., et al. 2005. Nucleoside transport at the blood-testis barrier studied with primary-cultured sertoli cells. J. Pharmacol. Exp. Ther. 312: 601-608.
7. Stolk, M., et al. 2005. Subtype-specific regulation of equilibrative nucleoside transporters by protein kinase CK2. Biochem. J. 386: 281-289.

CHROMOSOMAL LOCATION

Genetic locus: Slc29a2 (mouse) mapping to 19 A.

PRODUCT

ENT2 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 ENT2 shRNA Plasmid (m): sc-60586-SH and ENT2 shRNA (m) Lentiviral Particles: sc-60586-V as alternate gene silencing products.

For independent verification of ENT2 (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-60586A, sc-60586B and sc-60586C.

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

ENT2 siRNA (m) is recommended for the inhibition of ENT2 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.

GENE EXPRESSION MONITORING

ENT2 (D-9): sc-373871 is recommended as a control antibody for monitoring of ENT2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ENT2 gene expression knockdown using RT-PCR Primer: ENT2 (m)-PR: sc-60586-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Berghout, J., et al. 2013. Irf8-regulated genomic responses drive pathological inflammation during cerebral malaria. PLoS Pathog. 9: e1003491.

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.