SANTA CRUZ BIOTECHNOLOGY, INC.

CNT2 siRNA (m): sc-60424

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The Power to Question

BACKGROUND

The concentrative nucleoside transporter (CNT) family comprises three members: CNT1, CNT2 and CNT3. CNT2 participates in the absorption and disposition of endogenous nucleosides and mediates the first step of nucleotide biosynthesis. CNT2 levels are highly dependent on Insulin (but not glucose) concentration, and the protein is under the control of the Adenosine 1 receptor. CNT family members are imperative in the response of cells to a variety of anticancer and antiviral nucleoside analogs, as the CNT proteins modulate their entry into target tissues. Increasing evidence also suggests that CNT2 may have a role in energy metabolism because activation of CNT2 relies on the opening of ATP-sensitive K^+ channels.

REFERENCES

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3. 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.
4. 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.
5. Rodriguez-Mulero, S., et al. 2005. Expression of concentrative nucleoside transporters SLC28 (CNT1, CNT2 and CNT3) along the rat nephron: effect of diabetes. Kidney Int. 68: 665-672.
6. Owen, R.P., et al. 2005. Genetic analysis and functional characterization of polymorphisms in the human concentrative nucleoside transporter, CNT2. Pharmacogenet. Genomics 15: 83-90.
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CHROMOSOMAL LOCATION

Genetic locus: Slc28a2 (mouse) mapping to 2 E5.

PRODUCT

CNT2 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 CNT2 shRNA Plasmid (m): sc-60424-SH and CNT2 shRNA (m) Lentiviral Particles: sc-60424-V as alternate gene silencing products.

For independent verification of CNT2 (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-60424A, sc-60424B and sc-60424C.

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

CNT2 siRNA (m) is recommended for the inhibition of CNT2 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 CNT2 gene expression knockdown using RT-PCR Primer: CNT2 (m)-PR: sc-60424-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.