

CNT3 (C-15): sc-48137

BACKGROUND

The concentrative nucleoside transporter (CNT) protein family comprises three members: CNT1, CNT2 and CNT3. This family regulates multiple cellular processes, including neurotransmission, vascular tone and adenosine concentration in the vicinity of cell surface receptors. CNT3 plays an important role in mediating the cellular entry and metabolism of purine and pyrimidine nucleosides and a variety of synthetic antiviral and anticancer nucleoside analog drugs. Electrostatic interaction is the force that drives CNT3 transport. Specifically, CNT3 couples active nucleoside transport with passive sodium and proton transport.

REFERENCES

1. Yao, S.Y., Ng, A.M., Loewen, S.K., Cass, C.E., Baldwin, S.A. and Young, J.D. 2002. An ancient prevertebrate Na⁺-nucleoside cotransporter (hCNT) from the Pacific hagfish (*Eptatretus stouti*). *Am. J. Physiol. Cell Physiol.* 283: 155-168.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608269. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Kato, R., Maeda, T., Akaike, T. and Tamai, I. 2005. Nucleoside transport at the blood-testis barrier studied with primary-cultured sertoli cells. *J. Pharmacol. Exp. Ther.* 312: 601-608.
4. Rodriguez-Mulero, S., Errasti-Murugarre, E., Ballarin, J., Felipe, A., Doucet, A., Casado, F.J. and Pastor-Anglada, M. 2005. Expression of concentrative nucleoside transporters SLC28 (CNT1, CNT2 and CNT3) along the rat nephron: effect of diabetes. *Kidney Int.* 68: 665-672.
5. Badagnani, I., Chan, W., Castro, R.A., Brett, C.M., Huang, C.C., Stryke, D., Kawamoto, M., Johns, S.J., Ferrin, T.E., Carlson, E.J., Burchard, E.G. and Giacomini, K.M. 2005. Functional analysis of genetic variants in the human concentrative nucleoside transporter 3 (CNT3; SLC28A3). *Pharmacogenomics J.* 5: 157-165.
6. Aymerich, I., Duflo, S., Fernandez-Veledo, S., Guillen-Gomez, E., Huber-Ruano, I., Casado, F.J. and Pastor-Anglada, M. 2005. The concentrative nucleoside transporter family (SLC28): new roles beyond salvage? *Biochem. Soc. Trans.* 33: 216-219.
7. Damaraju, S., Zhang, J., Visser, F., Tackaberry, T., Dufour, J., Smith, K.M., Slugoski, M., Ritzel, M.W., Baldwin, S.A., Young, J.D. and Cass, C.E. 2005. Identification and functional characterization of variants in human concentrative nucleoside transporter 3, hCNT3 (SLC28A3), arising from single nucleotide polymorphisms in coding regions of the hCNT3 gene. *Pharmacogenet. Genomics* 15: 173-182.

CHROMOSOMAL LOCATION

Genetic locus: SLC28A3 (human) mapping to 9q21.32; Slc28a3 (mouse) mapping to 13 B1.

SOURCE

CNT3 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CNT3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48137 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CNT3 (C-15) is recommended for detection of CNT3 of human, mouse and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CNT3 (C-15) is also recommended for detection of CNT3 in additional species, including equine and canine.

Suitable for use as control antibody for CNT3 siRNA (h): sc-60425, CNT3 siRNA (m): sc-60426, CNT3 shRNA Plasmid (h): sc-60425-SH, CNT3 shRNA Plasmid (m): sc-60426-SH, CNT3 shRNA (h) Lentiviral Particles: sc-60425-V and CNT3 shRNA (m) Lentiviral Particles: sc-60426-V.

Molecular Weight of CNT3: 77 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.