

# CNT1 (C-14): sc-48457

## BACKGROUND

Nucleosides play a role in signaling in several physiologic systems, and synthetic analogs of natural nucleosides are often used to treat neoplastic and viral diseases. Plasma membrane transport of nucleosides is mediated by equilibrative and concentrative nucleoside transporters, which may have specificity for purines or pyrimidines. The deduced human 650 amino acid concentrative nucleoside transporter 1 (CNT1) protein is 83% identical to the rat protein and is expressed in the intestine, kidney and liver. CNT1, also designated solute carrier family 28 (sodium-coupled nucleoside transporter), member 1 (SLC28A1), expedites sodium-dependent fluxes of uridine, azido-deoxythymidine (AZT) and adenosine, but not of guanosine or deoxyadenosine, which undergo net renal secretion. CNT1 activity may serve as a putative mechanism for renal reabsorption of physiologic nucleosides and synthetic nucleoside drugs.

## REFERENCES

1. Cano-Soldado, P., et al. 2004. Interaction of nucleoside inhibitors of HIV-1 reverse transcriptase with the concentrative nucleoside transporter-1 (SLC28A1). *Antivir. Ther.* 9: 993-1002.
2. Gray, J.H., et al. 2004. Functional and genetic diversity in the concentrative nucleoside transporter, CNT1, in human populations. *Mol. Pharmacol.* 65: 512-519.
3. Aymerich, I., et al. 2005. The concentrative nucleoside transporter family (SLC28): new roles beyond salvage? *Biochem. Soc. Trans.* 33: 216-219.
4. Lai, Y., et al. 2005. Conserved residues F316 and G476 in the concentrative nucleoside transporter 1 (hCNT1) affect guanosine sensitivity and membrane expression, respectively. *Am. J. Physiol. Cell Physiol.* 288: C39-C45.
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.

## CHROMOSOMAL LOCATION

Genetic locus: SLC28A1 (human) mapping to 15q25.3; Slc28a1 (mouse) mapping to 7 D3.

## SOURCE

CNT1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CNT1 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-48457 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

CNT1 (C-14) is recommended for detection of CNT1 of mouse, rat and human 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).

CNT1 (C-14) is also recommended for detection of CNT1 in additional species, including porcine.

Suitable for use as control antibody for CNT1 siRNA (h): sc-60421, CNT1 siRNA (m): sc-60422, CNT1 shRNA Plasmid (h): sc-60421-SH, CNT1 shRNA Plasmid (m): sc-60422-SH, CNT1 shRNA (h) Lentiviral Particles: sc-60421-V and CNT1 shRNA (m) Lentiviral Particles: sc-60422-V.

Molecular Weight of CNT1: 72 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.

## SELECT PRODUCT CITATIONS

1. Lane, J., et al. 2010. The differential expression of hCNT1 and hENT1 in breast cancer and the possible impact on breast cancer therapy. *J. Exp. Ther. Oncol.* 8: 203-210.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.