SANTA CRUZ BIOTECHNOLOGY, INC.

CNT1 (G-7): sc-515874

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

CNT1 (G-7) is a mouse monoclonal antibody raised against amino acids 1-70 mapping at the N-terminus of CNT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CNT1 (G-7) is available conjugated to agarose (sc-515874 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515874 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515874 PE), fluorescein (sc-515874 FITC), Alexa Fluor® 488 (sc-515874 AF488), Alexa Fluor® 546 (sc-515874 AF546), Alexa Fluor® 594 (sc-515874 AF594) or Alexa Fluor® 647 (sc-515874 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515874 AF680) or Alexa Fluor® 790 (sc-515874 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

CNT1 (G-7) is recommended for detection of CNT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

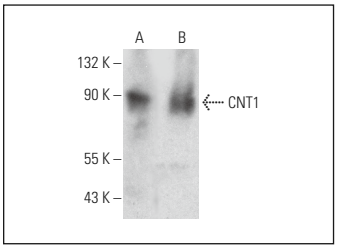
Molecular Weight of CNT1: 72 kDa.

Positive Controls: human kidney extract: sc-363764.

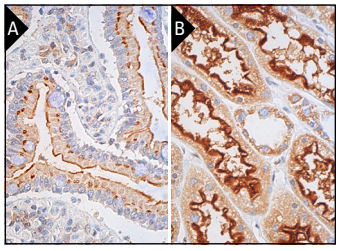
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CNT1 (G-7): sc-515874. Western blot analysis of CNT1 expression in 293T whole cell lysate (**A**) and human kidney tissue extract (**B**).



CNT1 (G-7): sc-515874. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing apical membrane and cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane and cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Boces-Pascual, C., et al. 2021. OncomiRs miR-106a and miR-17 negatively regulate the nucleoside-derived drug transporter hCNT1. Cell. Mol. Life Sci. 78: 7505-7518.

RESEARCH USE

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