SANTA CRUZ BIOTECHNOLOGY, INC.

NaDC-3 (G-23): sc-133803

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NaDC-3 (Na^+/dicarboxylate cotransporter 3), also known as SLC13A3 (solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 3) or SDCT2 (sodium-dependent high-affinity dicarboxylate transporter 2), is a 602 amino acid multi-pass membrane protein and high-affinity sodium-dicarboxylate cotransporter that exists as four alternatively spliced isoforms. As a member of the solute carrier family 13 (SLC13) gene family, NaDC-3 couples the transport of sodium and Krebs cycle intermediates, including succinate and citrate, across the plasma membrane. NaDC-3 binds three sodium ions followed by a divalent anion substrate, which results in one positive charge across the membrane. The gene encoding human NaDC-3 is localized to chromosome 20 and is expressed in kidney, liver, placenta, brain and pancreas.

REFERENCES

1. Pajor, A.M. 1999. Sodium-coupled transporters for Krebs cycle intermediates. Annu. Rev. Physiol. 61: 663-682.
2. Wang, H., Fei, Y.J., Kekuda, R., Yang-Feng, T.L., Devoe, L.D., Leibach, F.H., Prasad, P.D. and Ganapathy, V. 2000. Structure, function, and genomic organization of human Na^+-dependent high-affinity dicarboxylate transporter. Am. J. Physiol., Cell Physiol. 278: C1019-C1030.
3. Huang, W., Wang, H., Kekuda, R., Fei, Y.J., Friedrich, A., Wang, J., Conway, S.J., Cameron, R.S., Leibach, F.H. and Ganapathy, V. 2000. Transport of N-acetylaspartate by the Na^+-dependent high-affinity dicarboxylate transporter NaDC3 and its relevance to the expression of the transporter in the brain. J. Pharmacol. Exp. Ther. 295: 392-403.
4. Markovich, D. and Murer, H. 2004. The SLC13 gene family of sodium sulphate/carboxylate cotransporters. Pflugers Arch. 447: 594-602.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 606411. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Bai, X., Chen, X., Feng, Z., Hou, K., Zhang, P., Fu, B. and Shi, S. 2006. Identification of basolateral membrane targeting signal of human sodium-dependent dicarboxylate transporter 3. J. Cell. Physiol. 206: 821-830.

CHROMOSOMAL LOCATION

Genetic locus: SLC13A3 (human) mapping to 20q13.12.

SOURCE

NaDC-3 (G-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic NaDC-3 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

NaDC-3 (G-23) is recommended for detection of NaDC-3 of human origin by Western Blotting (starting dilution 1:200, 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 NaDC-3 siRNA (h): sc-75859, NaDC-3 shRNA Plasmid (h): sc-75859-SH and NaDC-3 shRNA (h) Lentiviral Particles: sc-75859-V.

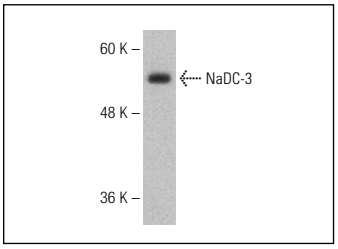
Molecular Weight of NaDC-3 soforms 1/2/3/4: 67/26/58/38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

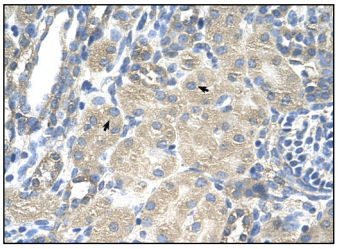
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



NaDC-3 (G-23): sc-133803. Western blot analysis of NaDC-3 expression in Jurkat whole cell lysate.



NaDC-3 (G-23): sc-133803. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing cytoplasmic localization.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **NaDC-3 (3A6): sc-293347**, our highly recommended monoclonal alternative to NaDC-3 (G-23).