SANTA CRUZ BIOTECHNOLOGY, INC.

NUDT9 (V-22): sc-133857

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NUDT9 (nudix (nucleoside diphosphate linked moiety X)-type motif 9), also known as NUDT10, is a 350 amino acid protein belonging to the superfamily of nudix hydrolases. Expressed as two isoforms that are produced as a result of alternative splicing events, NUDT9 isoform 1 localizes to the mitochondria and is the predominant isoform. NUDT9 is known to function as a highly specific adenosine diphosphate ribose pyrophosphatase that hydrolyzes ADP-ribose (ADPR) to AMP and ribose 5'-phosphate. It has been suggested that NUDT9 may be involved in the regulation of the menstrual cycle and may be related to the proliferation of glandular cells in the human endometrium. NUDT9 consist of two distinct domains: a proteolytically resistant C-terminal domain that retains essentially full specific ADPR pyrophosphatase activity, and a proteolytically labile N-terminal portion that functions to enhance the affinity of the C-terminal domain for ADPR.

REFERENCES

1. Perraud, A.L., et al. 2001. ADP-ribose gating of the calcium-permeable LTRPC2 channel revealed by nudix motif homology. Nature 411: 595-599.
2. Lin, S., et al. 2002. Cloning, expression and characterisation of a human nudix hydrolase specific for adenosine 5'-diphosphoribose (ADP-ribose). Biochim. Biophys. Acta 1594: 127-135.
3. Perraud, A.L., et al. 2003. TRPM2 Ca^{2+} permeable cation channels: from gene to biological function. Cell Calcium 33: 519-531.
4. Perraud, A.L., et al. 2003. NUDT9, a member of the nudix hydrolase family, is an evolutionarily conserved mitochondrial ADP-ribose pyrophosphatase. J. Biol. Chem. 278: 1794-1801.
5. Zhang, H.T., et al. 2003. Interaction of C17orf25 with ADP-ribose pyrophosphatase NUDT9 detected via yeast two-hybrid method. Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao 35: 747-751.

CHROMOSOMAL LOCATION

Genetic locus: NUDT9 (human) mapping to 4q22.1; Nudt9 (mouse) mapping to 5 E5.

SOURCE

NUDT9 (V-22) is an affinity purified rabbit polyclonal antibody raised against synthetic NUDT9 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl 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.

PROTOCOLS

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

APPLICATIONS

NUDT9 (V-22) is recommended for detection of NUDT9 of mouse, rat and 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 NUDT9 siRNA (h): sc-89144, NUDT9 siRNA (m): sc-106316, NUDT9 shRNA Plasmid (h): sc-89144-SH, NUDT9 shRNA Plasmid (m): sc-106316-SH, NUDT9 shRNA (h) Lentiviral Particles: sc-89144-V and NUDT9 shRNA (m) Lentiviral Particles: sc-106316-V.

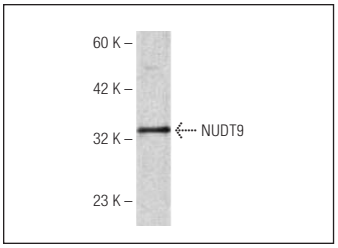
Molecular Weight of NUDT9: 39 kDa.

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

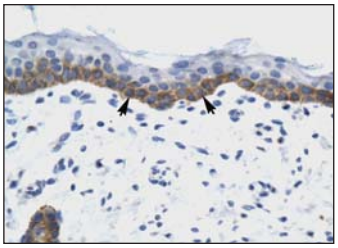
RECOMMENDED SECONDARY REAGENTS

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



NUDT9 (V-22): sc-133857. Western blot analysis of NUDT9 expression in Jurkat whole cell lysate.



NUDT9 (V-22): sc-133857. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skin tissue showing cytoplasmic localization.

RESEARCH USE

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