SANTA CRUZ BIOTECHNOLOGY, INC.

NUDT22 (H-9): sc-515491

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NUDT22 (nudix (nucleoside diphosphate linked moiety X)-type motif 22) is a member of the Nudix hydrolase family of pyrophosphatases. Nudix hydrolases contain a characteristic Nudix domain and are responsible for catalyzing the hydrolysis of nucleoside diphosphate derivatives. NUDT22 is a 303 amino acid protein that lacks the nudix box, therefore lacking hydrolase activity. The gene encoding NUDT17 maps to human chromosome 11, which makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome. The chromosome 11 encoded Atm gene is important for regulation of cell cycle arrest and apoptosis following double strand DNA breaks. Atm mutation leads to the disorder known as ataxia-telangiectasia. The blood disorders Sickle cell anemia and β thalassemia are caused by HBB gene mutations. Wilms' tumors, WAGR syndrome and Denys-Drash syndrome are associated with mutations of the WT1 gene.

REFERENCES

1. Grossfeld, P.D., et al. 2004. The 11q terminal deletion disorder: a prospective study of 110 cases. Am. J. Med. Genet. A 129A: 51-61.
2. Zehelein, J., et al. 2006. Skipping of Exon 1 in the KCNQ1 gene causes Jervell and Lange-Nielsen syndrome. J. Biol. Chem. 281: 35397-35403.

CHROMOSOMAL LOCATION

Genetic locus: NUDT22 (human) mapping to 11q13.1; Nudt22 (mouse) mapping to 19 A.

SOURCE

NUDT22 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-38 near the N-terminus of NUDT22 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.

NUDT22 (H-9) is available conjugated to agarose (sc-515491 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515491 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515491 PE), fluorescein (sc-515491 FITC), Alexa Fluor® 488 (sc-515491 AF488), Alexa Fluor® 546 (sc-515491 AF546), Alexa Fluor® 594 (sc-515491 AF594) or Alexa Fluor® 647 (sc-515491 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515491 AF680) or Alexa Fluor® 790 (sc-515491 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515491 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NUDT22 (H-9) is recommended for detection of NUDT22 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NUDT22 siRNA (h): sc-96311, NUDT22 siRNA (m): sc-150110, NUDT22 shRNA Plasmid (h): sc-96311-SH, NUDT22 shRNA Plasmid (m): sc-150110-SH, NUDT22 shRNA (h) Lentiviral Particles: sc-96311-V and NUDT22 shRNA (m) Lentiviral Particles: sc-150110-V.

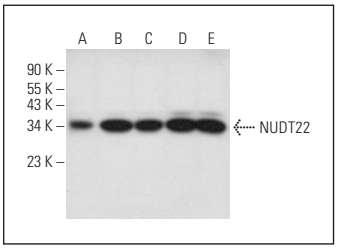
Molecular Weight of NUDT22: 33/23 kDa.

Positive Controls: NUDT22 (m): 293T Lysate: sc-122162, NCI-H929 whole cell lysate: sc-364786 or SK-BR-3 cell lysate: sc-2218.

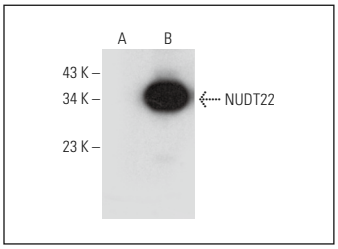
RECOMMENDED SUPPORT REAGENTS

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.

DATA



NUDT22 (H-9): sc-515491. Western blot analysis of NUDT22 expression in U-251-MG (**A**), NCI-H292 (**B**), SW480 (**C**) and SK-BR-3 (**D**) whole cell lysates and human small intestine tissue extract (**E**).



NUDT22 (H-9): sc-515491. Western blot analysis of NUDT22 expression in non-transfected: sc-117752 (**A**) and mouse NUDT22 transfected: sc-122162 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Walter, M., et al. 2023. NUDT22 promotes cancer growth through pyrimidine salvage. Oncogene 42: 1282-1293.

RESEARCH USE

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

PROTOCOLS

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