

# NUDT22 (B-11): sc-398665

## 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  $\beta$  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.
3. Loussouarn, G., et al. 2006. KCNQ1 K<sup>+</sup> channel-mediated cardiac channelopathies. *Methods Mol. Biol.* 337: 167-183.
4. Taylor, T.D., et al. 2006. Human chromosome 11 DNA sequence and analysis including novel gene identification. *Nature* 440: 497-500.
5. Lee, S.P., et al. 2007. Phase I study of eptifibatide in patients with sickle cell anaemia. *Br. J. Haematol.* 139: 612-620.
6. Berger, A.C., et al. 2007. The subcellular localization of the Niemann-Pick type C proteins depends on the adaptor complex AP-3. *J. Cell Sci.* 120: 3640-3652.
7. Lee, J.H. and Paull, T.T. 2007. Activation and regulation of ATM kinase activity in response to DNA double-strand breaks. *Oncogene* 26: 7741-7748.
8. O'Connor, M.J., et al. 2007. Targeted cancer therapies based on the inhibition of DNA strand break repair. *Oncogene* 26: 7816-7824.
9. Kaste, S.C., et al. 2008. Wilms tumour: prognostic factors, staging, therapy and late effects. *Pediatr. Radiol.* 38: 2-17.

## CHROMOSOMAL LOCATION

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

## SOURCE

NUDT22 (B-11) is a mouse monoclonal antibody raised against amino acids 157-303 mapping at the C-terminus of NUDT22 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NUDT22 (B-11) 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  $\mu$ g per 100-500  $\mu$ g 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.

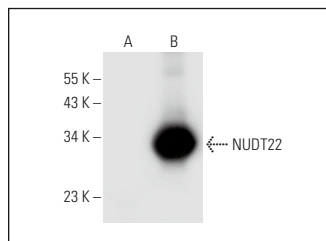
Molecular Weight of NUDT22: 33/23 kDa.

Positive Controls: NUDT22 (m): 293T Lysate: sc-122162.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 (B-11): sc-398665. Western blot analysis of NUDT22 expression in non-transfected: sc-117752 (A) and mouse NUDT22 transfected: sc-122162 (B) 293T whole cell lysates.

## STORAGE

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

## 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) for detailed protocols and support products.