

NUDT22 (m): 293T Lysate: sc-122162

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

- Grossfeld, P.D., Mattina, T., Lai, Z., Favier, R., Jones, K.L., Cotter, F. and Jones, C. 2004. The 11q terminal deletion disorder: a prospective study of 110 cases. *Am. J. Med. Genet. A* 129A: 51-61.
- Zehelein, J., Kathoefer, S., Khalil, M., Alter, M., Thomas, D., Brockmeier, K., Ulmer, H.E., Katus, H.A. and Koenen, M. 2006. Skipping of Exon 1 in the KCNQ1 gene causes Jervell and Lange-Nielsen syndrome. *J. Biol. Chem.* 281: 35397-35403.
- Loussouarn, G., Baró, I. and Escande, D. 2006. KCNQ1 K⁺ channel-mediated cardiac channelopathies. *Methods Mol. Biol.* 337: 167-183.
- Taylor, T.D., Noguchi, H., Totoki, Y., Toyoda, A., Kuroki, Y., Dewar, K., Lloyd, C., Itoh, T., Takeda, T., Kim, D.W., She, X., Barlow, K.F., Bloom, T., Bruford, E., Chang, J.L., Cuomo, C.A., Eichler, E., FitzGerald, M.G., et al. 2006. Human chromosome 11 DNA sequence and analysis including novel gene identification. *Nature* 440: 497-500.
- Lee, S.P., Ataga, K.I., Zayed, M., Manganello, J.M., Orringer, E.P., Phillips, D.R. and Parise, L.V. 2007. Phase I study of eptifibatide in patients with sickle cell anaemia. *Br. J. Haematol.* 139: 612-620.
- Berger, A.C., Salazar, G., Styers, M.L., Newell-Litwa, K.A., Werner, E., Maue, R.A., Corbett, A.H. and Faundez, V. 2007. The subcellular localization of the Niemann-Pick Type C proteins depends on the adaptor complex AP-3. *J. Cell Sci.* 120: 3640-3652.
- 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.
- O'Connor, M.J., Martin, N.M. and Smith, G.C. 2007. Targeted cancer therapies based on the inhibition of DNA strand break repair. *Oncogene* 26: 7816-7824.
- Kaste, S.C., Dome, J.S., Babyn, P.S., Graf, N.M., Grundy, P., Godzinski, J., Levitt, G.A. and Jenkinson, H. 2008. Wilms tumour: prognostic factors, staging, therapy and late effects. *Pediatr. Radiol.* 38: 2-17.

CHROMOSOMAL LOCATION

Genetic locus: Nudt22 (mouse) mapping to 19 A.

PRODUCT

NUDT22 (m): 293T Lysate represents a lysate of mouse NUDT22 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

NUDT22 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NUDT22 antibodies. Recommended use: 10-20 μ l per lane.

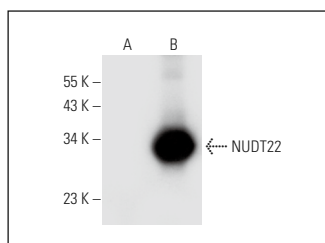
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NUDT22 (B-11): sc-398665 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse NUDT22 expression in NUDT22 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

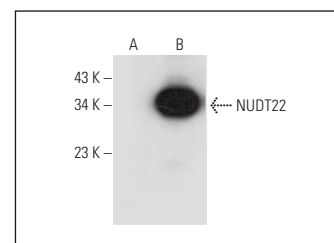
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

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.



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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.