SANTA CRUZ BIOTECHNOLOGY, INC.

NUDT7 (D-1): sc-515481

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NUDT7 (nucleoside diphosphate-linked moiety X motif 7), also known as peroxisomal coenzyme A diphosphatase NUDT7 or nudix motif 7, is a 238 amino acid protein that functions as a coenzyme A diphosphatase that mediates the cleavage of CoA into 3',5'-ADP and 4'-phosphopantetheine. Localized to the peroxisome, NUDT7 belongs to the nudix hydrolase family and PCD1 subfamily. NUDT7 is expressed in heart, spleen, liver, pancreas, pituitary, small intestine, kidney and placenta. NUDT7 contains one nudix hydrolase domain and is encoded by a gene that maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Baraitser, M., et al. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. Am. J. Hum. Genet. 52: 249-254.
3. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. Nat. Genet. 26: 370-374.
4. Gasmi, L., et al. 2001. The mouse Nudt7 gene encodes a peroxisomal nudix hydrolase specific for coenzyme A and its derivatives. Biochem. J. 357: 33-38.
5. Kuhlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. Neurology 58: 1273-1276.
6. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. Curr. Gastroenterol. Rep. 6: 467-473.
7. Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. Hum. Mol. Genet. 13: R161-R168.

CHROMOSOMAL LOCATION

Genetic locus: NUDT7 (human) mapping to 16q23.1.

SOURCE

NUDT7 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 163-188 within an internal region of NUDT7 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.

Blocking peptide available for competition studies, sc-515481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NUDT7 (D-1) is recommended for detection of NUDT7 of 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).

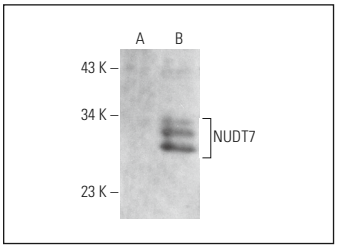
Molecular Weight of NUDT7: 27 kDa.

Positive Controls: NUDT7 (h): 293T Lysate: sc-372453.

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



NUDT7 (D-1): sc-515481. Western blot analysis of NUDT7 expression in non-transfected: sc-117752 (**A**) and human NUDT7 transfected: sc-372453 (**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 for detailed protocols and support products.