

NUDT5 (E-4): sc-398644

BACKGROUND

NUDT5 (nudix (nucleoside diphosphate linked moiety X)-type motif 5), whose alternative names include YSA1, YSA1H, hYSAH1, nudix motif 5, ADP-sugar pyrophosphatase or HSPC115, is a 219 amino acid protein belonging to the nudix hydrolase family. NUDT5 hydrolyzes ADP-ribose and ADP-mannose in the presence of magnesium, and also hydrolyzes other nucleotide sugars with low activity such as ADP-glucose and diadenosine diphosphate. As a nudix hydrolase, NUDT5 contains a central nudix motif and functions to eliminate toxic nucleotide metabolites from the cell while maintaining the levels of signaling nucleotides. NUDT5 is widely expressed but is most abundant in liver as a homodimer.

REFERENCES

1. Gasmi, L., et al. 1999. Cloning, expression and characterization of YSA1H, a human adenosine 5'-diphosphosugar pyrophosphatase possessing a MutT motif. *Biochem. J.* 344: 331-337.
2. McLennan, A.G. 1999. The MutT motif family of nucleotide phosphohydrolases in man and human pathogens (review). *Int. J. Mol. Med.* 4: 79-89.
3. Yang, H., et al. 2000. Cloning and characterization of a new member of the Nudix hydrolases from human and mouse. *J. Biol. Chem.* 275: 8844-8853.
4. Ishibashi, T., et al. 2003. A novel mechanism for preventing mutations caused by oxidation of guanine nucleotides. *EMBO Rep.* 4: 479-483.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609230. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NUDT5 (human) mapping to 10p13; Nudt5 (mouse) mapping to 2 A1.

SOURCE

NUDT5 (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 143-189 within an internal region of NUDT5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NUDT5 (E-4) is available conjugated to agarose (sc-398644 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398644 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398644 PE), fluorescein (sc-398644 FITC), Alexa Fluor® 488 (sc-398644 AF488), Alexa Fluor® 546 (sc-398644 AF546), Alexa Fluor® 594 (sc-398644 AF594) or Alexa Fluor® 647 (sc-398644 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398644 AF680) or Alexa Fluor® 790 (sc-398644 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398644 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NUDT5 (E-4) is recommended for detection of NUDT5 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 NUDT5 siRNA (h): sc-75973, NUDT5 siRNA (m): sc-75974, NUDT5 shRNA Plasmid (h): sc-75973-SH, NUDT5 shRNA Plasmid (m): sc-75974-SH, NUDT5 shRNA (h) Lentiviral Particles: sc-75973-V and NUDT5 shRNA (m) Lentiviral Particles: sc-75974-V.

Molecular Weight (predicted) of NUDT5: 24 kDa.

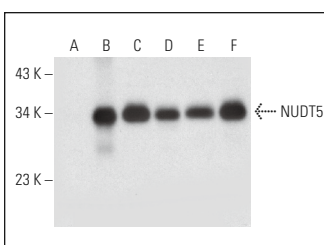
Molecular Weight (observed) of NUDT5: 34 kDa.

Positive Controls: NUDT5 (m): 293T Lysate: sc-127247, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

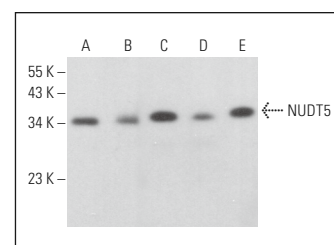
RECOMMENDED SUPPORT REAGENTS

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



NUDT5 (E-4): sc-398644. Western blot analysis of NUDT5 expression in non-transfected 293T: sc-117752 (A), mouse NUDT5 transfected 293T: sc-127247 (B), HeLa (C), Hep G2 (D), U-937 (E) and Jurkat (F) whole cell lysates.



NUDT5 (E-4): sc-398644. Western blot analysis of NUDT5 expression in Hep G2 (A), K-562 (B), 3T3-L1 (C), Neuro-2A (D) and C6 (E) 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.

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