

NUDT3/4/10/11 (B-8): sc-398923

BACKGROUND

NUDT (nudix (nucleoside diphosphate linked moiety X)-type motif) 3, 4, 10 and 11 are members 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. NUDT3 acts as a negative regulator of the ERK 1/2 pathway, hydrolyzes 5-phosphoribose 1-diphosphate and is suggested to play a role in signal transduction. NUDT4 is also implicated in signal transduction and catalyzes dinucleoside oligophosphate Ap6A hydrolysis. NUDT10 functions as a manganese-dependent poly-phosphate phosphohydrolase and specifically metabolizes diadenosine-polyphosphates and diphosphoinositol polyphosphates, to a lesser extent. NUDT10 is very closely related to NUDT11; the two proteins differ from one another by only one amino acid.

REFERENCES

1. Safrany, S.T., et al. 1998. A novel context for the "MutT" module, a guardian of cell integrity, in a diphosphoinositol polyphosphate phosphohydrolase. *EMBO J.* 17: 6599-6607.
2. Safrany, S.T., et al. 1999. The diadenosine hexaphosphate hydrolases from *Schizosaccharomyces pombe* and *Saccharomyces cerevisiae* are homologues of the human diphosphoinositol polyphosphate phosphohydrolase. Overlapping substrate specificities in a MutT-type protein. *J. Biol. Chem.* 274: 21735-21740.
3. Caffrey, J.J., et al. 2000. Discovery of molecular and catalytic diversity among human diphosphoinositol-polyphosphate phosphohydrolases. An expanding NUDT family. *J. Biol. Chem.* 275: 12730-12736.
4. Caffrey, J.J. and Shears, S.B. 2001. Genetic rationale for microheterogeneity of human diphosphoinositol polyphosphate phosphohydrolase type 2. *Gene* 269: 53-60.
5. Leslie, N.R., et al. 2002. Cloning and characterisation of hAps1 and hAps2, human diadenosine polyphosphate-metabolising Nudix hydrolases. *BMC Biochem.* 3: 20.

SOURCE

NUDT3/4/10/11 (B-8) is a mouse monoclonal antibody raised against amino acids 1-50 mapping at the N-terminus of NUDT11 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NUDT3/4/10/11 (B-8) is available conjugated to agarose (sc-398923 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398923 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398923 PE), fluorescein (sc-398923 FITC), Alexa Fluor® 488 (sc-398923 AF488), Alexa Fluor® 546 (sc-398923 AF546), Alexa Fluor® 594 (sc-398923 AF594) or Alexa Fluor® 647 (sc-398923 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398923 AF680) or Alexa Fluor® 790 (sc-398923 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NUDT3/4/10/11 (B-8) is recommended for detection of NUDT3, NUDT4, NUDT10 and NUDT11 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).

Molecular Weight of NUDT3: 19 kDa.

Molecular Weight of NUDT4: 20 kDa.

Molecular Weight of NUDT10: 19 kDa.

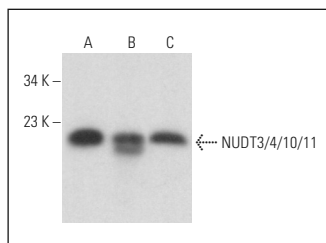
Molecular Weight of NUDT11: 26 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, IMR-32 cell lysate: sc-2409 or mouse brain extract: sc-2253.

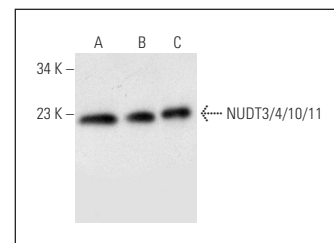
RECOMMENDED SUPPORT REAGENTS

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



NUDT3/4/10/11 (B-8): sc-398923. Western blot analysis of NUDT3/4/10/11 expression in IMR-32 (A) and SK-N-MC (B) whole cell lysates and rat brain tissue extract (C).



NUDT3/4/10/11 (B-8): sc-398923. Western blot analysis of NUDT3/4/10/11 expression in NTERA-2 cl.D1 (A) and IMR-32 (B) whole cell lysates and mouse brain tissue extract (C).

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.