

# NUDT10 (4B7): sc-100571

## BACKGROUND

NUDT10 (nudix (nucleoside diphosphate linked moiety X)-type motif 10), also known as APS2 (A<sub>P</sub>cA hydrolase 2) or DIPP3 $\alpha$  (diphosphoinositol polyphosphate phosphohydrolase 3  $\alpha$ ), 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. NUDT10 functions as a manganese-dependent polyphosphate phosphohydrolase with an optimum pH of 8.5. NUDT10 specifically metabolizes diadenosine-polyphosphates and, to a lesser extent, diphosphoinositol polyphosphates. Localizing to the cytoplasm, NUDT10 is predominantly expressed in brain and liver tissues, but is also found in prostate, testis, ovary, kidney, pancreas, placenta, spleen, lung and heart. NUDT10 is very closely related to NUDT11; the two proteins differ from one another by only one amino acid.

## REFERENCES

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- Leslie, N.R., et al. 2002. Cloning and characterisation of hAps1 and hAps2, human diadenosine polyphosphate-metabolising nudix hydrolases. *BMC Biochem.* 3: 20.
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- Hua, L.V., et al. 2003. Paralogous murine NUDT10 and NUDT11 genes have differential expression patterns but encode identical proteins that are physiologically competent diphosphoinositol polyphosphate phosphohydrolases. *Biochem. J.* 373: 81-89.
- Jung, J., et al. 2007. Overexpression, crystallization and preliminary X-ray crystallographic analysis of nudix hydrolase Orf141 from *Escherichia coli* K-1. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* 63: 812-815.
- Gabelli, S.B., et al. 2007. Structure and function of the *E. coli* dihydro-neopterin triphosphate pyrophosphatase: a Nudix enzyme involved in folate biosynthesis. *Structure* 15: 1014-1022.
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## CHROMOSOMAL LOCATION

Genetic locus: NUDT10 (human) mapping to Xp11.22; Nudt10 (mouse) mapping to X A1.1.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## SOURCE

NUDT10 (4B7) is a mouse monoclonal antibody raised against recombinant NUDT10 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NUDT10 (4B7) is recommended for detection of NUDT10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NUDT10 siRNA (h): sc-90886, NUDT10 siRNA (m): sc-150100, NUDT10 shRNA Plasmid (h): sc-90886-SH, NUDT10 shRNA Plasmid (m): sc-150100-SH, NUDT10 shRNA (h) Lentiviral Particles: sc-90886-V and NUDT10 shRNA (m) Lentiviral Particles: sc-150100-V.

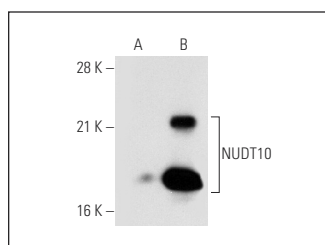
Molecular Weight of NUDT10: 19 kDa.

Positive Controls: NUDT10 (h): 293T Lysate: sc-115943, IMR-32 cell lysate: sc-2409 or PC-12 cell lysate: sc-2250.

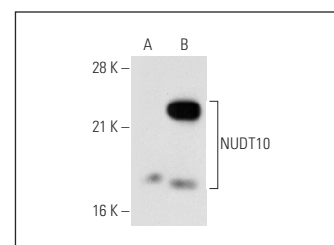
## RECOMMENDED SUPPORT REAGENTS

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).

## DATA



NUDT10 (4B7): sc-100571. Western blot analysis of NUDT10 expression in non-transfected: sc-117752 (A) and human NUDT10 transfected: sc-115943 (B) 293T whole cell lysates.



NUDT10 (4B7): sc-100571. Western blot analysis of NUDT10 expression in non-transfected: sc-117752 (A) and human NUDT10 transfected: sc-116322 (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.