

NT5C2 (FF-12): sc-82000

BACKGROUND

Nucleotidases are hydrolytic enzymes that catalyze the hydrolysis of nucleotides into phosphates and nucleosides. NT5C2 (5'-nucleotidase, cytosolic II), also known as NT5B, NT5CP or PNT5, is a 561 amino acid protein that has an essential role in the maintenance of purine/pyrimidine nucleotides. NT5C2 contains a phosphotransferase active site that catalyzes the dephosphorylation of 6-hydroxypurine nucleoside 5'-monophosphates. NT5C2 is allosterically activated by ATP and various other compounds. In addition, NT5C2 regulates the level of inosine monophosphate (IMP) and guanosine monophosphate (GMP) pools within cells via hydrolysis. NT5C2 is structurally similar to enzymes of the haloacid dehalogenase (HAD) superfamily. Members of this superfamily function as hydrolases, converting haloacid to hydroxy acid and a halide. NT5C2 is localized to the cytoplasmic matrix of cells. Defects in the gene that encodes NT5C2 may cause increased uric acid concentrations in cells, which can lead to gout and/or hyperuricemia.

REFERENCES

1. Oka, J., et al. 1994. Molecular cloning of human cytosolic purine 5'-nucleotidase. *Biochem. Biophys. Res. Commun.* 205: 917-922.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600417. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Galmarini, C.M., et al. 2005. The prognostic value of cN-II and cN-III enzymes in adult acute Myeloid leukemia. *Haematologica* 90: 1699-1701.
4. Sève, P., et al. 2005. cN-II expression predicts survival in patients receiving gemcitabine for advanced non-small cell lung cancer. *Lung Cancer* 49: 363-370.
5. Jordheim, L.P., et al. 2006. F-ara-AMP is a substrate of cytoplasmic 5'-nucleotidase II (cN-II): HPLC and NMR studies of enzymatic dephosphorylation. *Nucleosides Nucleotides Nucleic Acids* 25: 289-297.
6. Galmarini, C.M. 2007. What does overexpression of cN-II enzyme signify in haematological malignancies? *Leuk. Res.* 31: 1325-1326.

CHROMOSOMAL LOCATION

Genetic locus: NT5C2 (human) mapping to 10q24.32; Nt5c2 (mouse) mapping to 19 C3.

SOURCE

NT5C2 (FF-12) is a mouse monoclonal antibody raised against recombinant NT5C2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

NT5C2 (FF-12) is recommended for detection of NT5C2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 NT5C2 siRNA (h): sc-90370, NT5C2 siRNA (m): sc-150081, NT5C2 shRNA Plasmid (h): sc-90370-SH, NT5C2 shRNA Plasmid (m): sc-150081-SH, NT5C2 shRNA (h) Lentiviral Particles: sc-90370-V and NT5C2 shRNA (m) Lentiviral Particles: sc-150081-V.

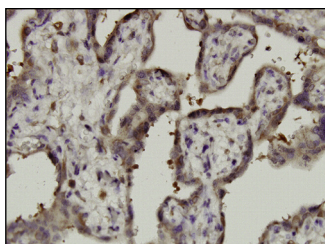
Molecular Weight of NT5C2: 65 kDa.

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.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NT5C2 (FF-12): sc-82000. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing cytoplasmic localization.

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.