

NT5C3 (T-25): sc-133850

BACKGROUND

Nucleotidases are hydrolytic enzymes that catalyze the hydrolysis of nucleotides into phosphates and nucleosides. NT5C3 (5'-nucleotidase, cytosolic III), also known as P5N1 or UMPH1, is a 336 amino acid protein that exists as multiple alternatively spliced isoforms which localize to either the cytoplasm or the endoplasmic reticulum. Expressed in an isoform-specific manner in lymphocytes and reticulocytes, NT5C3 belongs to the pyrimidine 5'-nucleotidase family and exists as a monomer which acts as both a nucleotidase and a phosphotransferase, effectively catalyzing the conversion of a 5'-ribonucleotide to a ribonucleoside and a free phosphate. Defects in the gene encoding NT5C3 are the cause of P5N deficiency, an autosomal recessive disorder that is associated with hemolytic anemia and is characterized by lead poisoning and learning difficulties.

REFERENCES

- Amici, A., et al. 1994. Homogeneous pyrimidine nucleotidase from human erythrocytes: enzymic and molecular properties. *Biochem. J.* 304: 987-992.
- Amici, A., et al. 2000. Human erythrocyte pyrimidine 5-nucleotidase, PN-I, is identical to p36, a protein associated to lupus inclusion formation in response to α -interferon. *Blood* 96: 1596-1598.
- Balta, G., et al. 2003. Molecular characterization of Turkish patients with pyrimidine 5'-nucleotidase-I deficiency. *Blood* 102: 1900-1903.
- Rees, D.C., et al. 2003. Pyrimidine 5'-nucleotidase deficiency. *Br. J. Haematol.* 120: 375-383.
- Bianchi, P., et al. 2003. Molecular characterization of six unrelated Italian patients affected by pyrimidine 5'-nucleotidase deficiency. *Br. J. Haematol.* 122: 847-851.
- Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 606224. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Chiarelli, L.R., et al. 2005. Functional analysis of pyrimidine 5'-nucleotidase mutants causing nonspherocytic hemolytic anemia. *Blood* 105: 3340-3345.

CHROMOSOMAL LOCATION

Genetic locus: NT5C3 (human) mapping to 7p14.3.

SOURCE

NT5C3 (T-25) is an affinity purified rabbit polyclonal antibody raised against synthetic NT5C3 peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

NT5C3 (T-25) is recommended for detection of NT5C3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 NT5C3 siRNA (h): sc-89592, NT5C3 shRNA Plasmid (h): sc-89592-SH and NT5C3 shRNA (h) Lentiviral Particles: sc-89592-V.

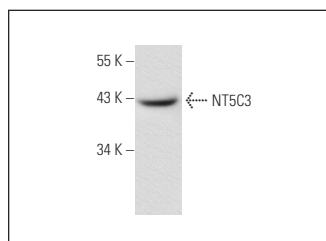
Molecular Weight of NT5C3: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

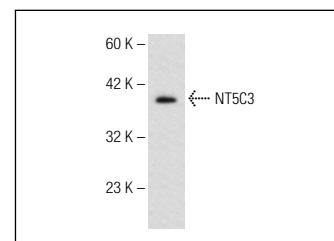
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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



NT5C3 (T-25): sc-133850. Western blot analysis of NT5C3 expression in Jurkat whole cell lysate.



NT5C3 (T-25): sc-133850. Western blot analysis of NT5C3 expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

- Gimigliano, A., et al. 2012. Proteomic profile identifies dysregulated pathways in Cornelia de Lange syndrome cells with distinct mutations in SMC1A and SMC3 genes. *J. Proteome Res.* 11: 6111-6123.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **NT5C3 (E-8): sc-390782**, our highly recommended monoclonal alternative to NT5C3 (T-25).