SANTA CRUZ BIOTECHNOLOGY, INC.

NT5C3L (D-8): sc-514456

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'-ribonucleo-tide to a ribonucleoside and a free phosphate. NT5C3L (5'-nucleotidase, cyto-solic III-like), also known as cN-III-like protein, is a 292 amino acid cytoplasmic protein belonging to the pyrimidine 5'-nucleotidase family that also functions as a nucleotidase and a phosphotransferase.

REFERENCES

1. Amici, A., et al. 1994. Homogeneous pyrimidine nucleotidase from human erythrocytes: enzymic and molecular properties. Biochem. J. 304: 987-992.
2. 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.
3. Balta, G., et al. 2003. Molecular characterization of Turkish patients with pyrimidine 5' nucleotidase-I deficiency. Blood 102: 1900-1903.
4. Rees, D.C., et al. 2003. Pyrimidine 5' nucleotidase deficiency. Br. J. Haematol. 120: 375-383.
5. Bianchi, P., et al. 2003. Molecular characterization of six unrelated Italian patients affected by pyrimidine 5'-nucleotidase deficiency. Br. J. Haematol. 122: 847-851.
6. 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/
7. 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: NT5C3B (human) mapping to 17q21.2; Nt5c3b (mouse) mapping to 11 D.

SOURCE

NT5C3L (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-15 near the N-terminus of NT5C3L of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514456 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NT5C3L (D-8) is recommended for detection of NT5C3L 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 NT5C3L siRNA (h): sc-93563, NT5C3L siRNA (m): sc-150082, NT5C3L shRNA Plasmid (h): sc-93563-SH, NT5C3L shRNA Plasmid (m): sc-150082-SH, NT5C3L shRNA (h) Lentiviral Particles: sc-93563-V and NT5C3L shRNA (m) Lentiviral Particles: sc-150082-V.

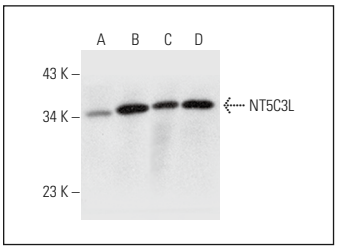
Molecular Weight of NT5C3L: 34 kDa.

Positive Controls: human liver extract: sc-363766, human testis extract: sc-363781 or human stomach extract: sc-363780.

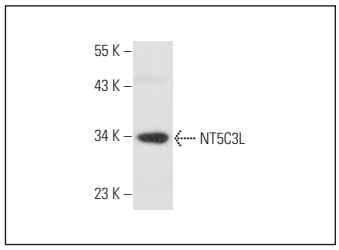
RECOMMENDED SUPPORT REAGENTS

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



NT5C3L (D-8): sc-514456. Western blot analysis of NT5C3L expression in human liver (**A**), human testis (**B**), human placenta (**C**) and human stomach (**D**) tissue extracts.



NT5C3L (D-8): sc-514456. Western blot analysis of NT5C3L expression in WI-38 whole cell lysate.

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.