

NSUN7 (S-16): sc-83458

BACKGROUND

The nucleolus consists of a number of specific proteins that play a critical role in the assembly of ribosomes, as well as in the maintenance and structural integrity of the nucleolus. NSUN7 (NOL1/NOP2/Sun domain family, member 7) is a 718 amino acid protein that belongs to the methyltransferase superfamily. It is thought that NSUN7 is involved in mitochondrial rRNA processing in post-meiotic sperm and that disruption of the gene causes a general deficiency of mRNA translation and of the proteins required for optimal sperm function. Existing as three isoforms due to alternative splicing, NSUN7 may have S-adenosyl-L-methionine-dependent methyl-transferase activity.

REFERENCES

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2. Merla, G., Ucla, C., Guipponi, M. and Reymond, A. 2002. Identification of additional transcripts in the Williams-Beuren syndrome critical region. *Hum. Genet.* 110: 429-438.
3. Frye, M. and Watt, F.M. 2006. The RNA methyltransferase Misu (NSUN2) mediates Myc-induced proliferation and is upregulated in tumors. *Curr. Biol.* 16: 971-981.
4. Harris, T., Marquez, B., Suarez, S. and Schimenti, J. 2007. Sperm motility defects and infertility in male mice with a mutation in NSUN7, a member of the Sun domain-containing family of putative RNA methyltransferases. *Biol. Reprod.* 77: 376-382.
5. Sakita-Suto, S., Kanda, A., Suzuki, F., Sato, S., Takata, T. and Tatsuka, M. 2007. Aurora-B regulates RNA methyltransferase NSUN2. *Mol. Biol. Cell* 18: 1107-1117.

CHROMOSOMAL LOCATION

Genetic locus: NSUN7 (human) mapping to 4p14; Nsun7 (mouse) mapping to 5 C3.1.

SOURCE

NSUN7 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NSUN7 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83458 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-83458 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

NSUN7 (S-16) is recommended for detection of NSUN7 of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other NSUN family members.

NSUN7 (S-16) is also recommended for detection of NSUN7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NSUN7 siRNA (h): sc-75970, NSUN7 siRNA (m): sc-75971, NSUN7 shRNA Plasmid (h): sc-75970-SH, NSUN7 shRNA Plasmid (m): sc-75971-SH, NSUN7 shRNA (h) Lentiviral Particles: sc-75970-V and NSUN7 shRNA (m) Lentiviral Particles: sc-75971-V.

NSUN7 (S-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

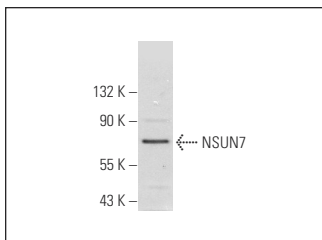
Molecular Weight of NSUN7 isoforms: 81/54/32 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NSUN7 (S-16): sc-83458. Western blot analysis of NSUN7 expression in K-562 whole cell lysate.

RESEARCH USE

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