

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

1. Wu, P., Brockenbrough, J.S., Paddy, M.R. and Aris, J.P. 1998. NCL1, a novel gene for a non-essential nuclear protein in *Saccharomyces cerevisiae*. *Gene* 220: 109-117.
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 (L-13) 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-83456 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-83456 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 (L-13) is recommended for detection of NSUN7 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (L-13) 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.

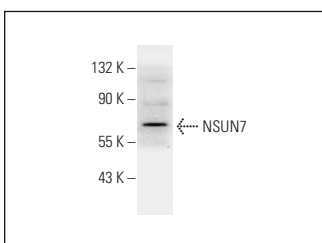
NSUN7 (L-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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) 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 (L-13): sc-83456. Western blot analysis of NSUN7 expression in K-562 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.