

# NSUN5/5B/5C (P-18): sc-107277

## BACKGROUND

NSUN5 (NOL1/NOP2/Sun domain family, member 5), also known as NOL1, p120 or NOL1R, is a 429 amino acid protein that belongs to the methyltransferase superfamily and exists as multiple alternatively spliced isoforms. Expressed ubiquitously with higher expression in heart, placenta and skeletal muscle, NSUN5 is thought to function as an S-adenosyl-L-methionine-dependent methyl-transferase whose absence may be associated with the pathogenesis of Williams syndrome. NSUN5 is subject to post-translational phosphorylation, probably by ATM or ATR. NSUN5B and NSUN5C are truncated proteins that are also ubiquitously expressed, but with some tissue specific patterns.

## REFERENCES

- Liang, H., Fairman, J., Claxton, D.F., Nowell, P.C., Green, E.D. and Nagarajan, L. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
- Francke, U. 1999. Williams-Beuren syndrome: genes and mechanisms. *Hum. Mol. Genet.* 8: 1947-1954.
- Doll, A. and Grzeschik, K.H. 2001. Characterization of two novel genes, WBSR20 and WBSR22, deleted in Williams-Beuren syndrome. *Cytogenet. Cell Genet.* 95: 20-27.
- 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.
- Bayes, M., Magano, L.F., Rivera, N., Flores, R. and Perez Jurado, L.A. 2003. Mutational mechanisms of Williams-Beuren syndrome deletions. *Am. J. Hum. Genet.* 73: 131-151.
- Eckert, M.A., Galaburda, A.M., Mills, D.L., Bellugi, U., Korenberg, J.R. and Reiss, A.L. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? *Cell. Mol. Life Sci.* 63: 1867-1875.
- Osborne, L.R., Joseph-George, A.M. and Scherer, S.W. 2006. Williams-Beuren syndrome diagnosis using fluorescence *in situ* hybridization. *Methods Mol. Med.* 126:113-128.
- Schubert, C. 2009. The genomic basis of the Williams-Beuren syndrome. *Cell. Mol. Life Sci.* 66: 1178-1197.

## CHROMOSOMAL LOCATION

Genetic locus: NSUN5/NSUN5P1/NSUN5P2 (human) mapping to 7q11.23.

## SOURCE

NSUN5/5B/5C (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NSUN5B of human origin.

## STORAGE

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

## 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-107277 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NSUN5/5B/5C (P-18) is recommended for detection of NSUN5, NSUN5B and NSUN5C of 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.

NSUN5/5B/5C (P-18) is also recommended for detection of NSUN5, NSUN5B and NSUN5C in additional species, including equine, canine, bovine and porcine.

Molecular Weight of NSUN5: 47 kDa.

Molecular Weight of NSUN5B: 17 kDa.

Molecular Weight of NSUN5C: 34 kDa.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.