SANTA CRUZ BIOTECHNOLOGY, INC.

# NSUN5 (H-139): sc-292513

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*The Power to Question*

## 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. The gene encoding NSUN5 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Williams syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

## REFERENCES


1. 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.
2. Francke, U. 1999. Williams-Beuren syndrome: genes and mechanisms. Hum. Mol. Genet. 8: 1947-1954.
3. Doll, A. and Grzeschik, K.H. 2001. Characterization of two novel genes, WBSCR20 and WBSCR22, deleted in Williams-Beuren syndrome. Cytogenet. Cell Genet. 95: 20-27.
4. 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.
5. Bayés, M., Magano, L.F., Rivera, N., Flores, R. and Pérez Jurado, L.A. 2003. Mutational mechanisms of Williams-Beuren syndrome deletions. Am. J. Hum. Genet. 73: 131-151.
6. 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.
7. 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.
8. Schubert, C. 2009. The genomic basis of the Williams-Beuren syndrome. Cell. Mol. Life Sci. 66: 1178-1197.


## CHROMOSOMAL LOCATION

Genetic locus: NSUN5 (human) mapping to 7q11.23; Nsun5 (mouse) mapping to 5 G2.

## SOURCE

NSUN5 (H-139) is a rabbit polyclonal antibody raised against amino acids 227-365 mapping near the C-terminus of NSUN5 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.

## APPLICATIONS

NSUN5 (H-139) is recommended for detection of NSUN5 of mouse, rat 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).

NSUN5 (H-139) is also recommended for detection of NSUN5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NSUN5 siRNA (h): sc-89751, NSUN5 siRNA (m): sc-106312, NSUN5 shRNA Plasmid (h): sc-89751-SH, NSUN5 shRNA Plasmid (m): sc-106312-SH, NSUN5 shRNA (h) Lentiviral Particles: sc-89751-V and NSUN5 shRNA (m) Lentiviral Particles: sc-106312-V.

Molecular Weight of NSUN5: 47 kDa.

## 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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 or our catalog for detailed protocols and support products.