

Nop58 (C-20): sc-23705

BACKGROUND

Methylation of the ribose 2'-hydroxyl, the most widespread modification of ribosomal and splicesomal RNAs, is guided by the box C/D class of small nucleolar RNAs (snoRNAs). Box C/D small nucleolar ribonucleoproteins (snoRNPs) contain four core proteins: fibrillarin, Nop56, Nop58 and 15.5. These four proteins consist of two protein pairs: members of each pair are highly related in sequence. One protein pair corresponds to the essential yeast nucleolar proteins Nop56p and Nop58p. The homologous proteins Nop56 and Nop58 and 61K (hPrp31) associate with the box C/D snoRNPs and the U4/U6 snRNP, respectively. Both Nop56 and Nop58 are associated with Nopl in complexes, Nop56 and Nop1 exhibiting a stoichiometric association, and are required for ribosome biogenesis. Nop58 is 46.8% identical to *Saccharomyces cerevisiae* Nop5/Nop58.

REFERENCES

- Gautier, T., et al. 1997. Nucleolar KKE/D repeat proteins Nop56p and Nop58p interact with Nop1p and are required for ribosome biogenesis. *Mol. Cell. Biol.* 17: 7088-7098.
- Lyman, S.K., et al. 1999. Human Nop5/Nop58 is a component common to the box C/D small nucleolar ribonucleoproteins. *RNA* 5: 1597-1604.
- Newman, D.R., et al. 2000. Box C/D snoRNA-associated proteins: two pairs of evolutionarily ancient proteins and possible links to replication and transcription. *RNA* 6: 861-879.
- Watkins, N.J., et al. 2002. Conserved stem II of the box C/D motif is essential for nucleolar localization and is required, along with the 15.5K protein, for the hierarchical assembly of the box C/D snoRNP. *Mol. Cell. Biol.* 22: 8342-8352.
- Cahill, N.M., et al. 2002. Site-specific cross-linking analyses reveal an asymmetric protein distribution for a box C/D snoRNP. *EMBO J.* 21: 3816-3828.

CHROMOSOMAL LOCATION

Genetic locus: NOP58 (human) mapping to 2q33.1; Nop58 (mouse) mapping to 1 C1.3.

SOURCE

Nop58 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Nop58 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-23705 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Nop58 (C-20) is recommended for detection of Nop58 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).

Nop58 (C-20) is also recommended for detection of Nop58 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Nop58 siRNA (h): sc-40907, Nop58 siRNA (m): sc-40908, Nop58 shRNA Plasmid (h): sc-40907-SH, Nop58 shRNA Plasmid (m): sc-40908-SH, Nop58 shRNA (h) Lentiviral Particles: sc-40907-V and Nop58 shRNA (m) Lentiviral Particles: sc-40908-V.

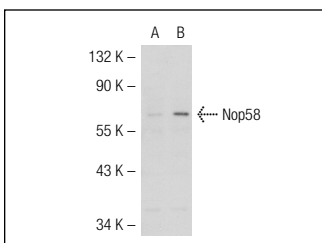
Molecular Weight of Nop58: 60 kDa.

Positive Controls: Nop58 (h): 293T Lysate: sc-115242 or A-431 whole cell lysate: sc-2201.

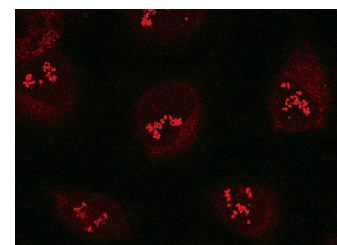
RECOMMENDED SECONDARY REAGENTS

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



Nop58 (C-20): sc-23705. Western blot analysis of Nop58 expression in non-transfected: sc-117752 (A) and human Nop58 transfected: sc-115242 (B) 293T whole cell lysates.



Nop58 (C-20): sc-23705. Immunofluorescence staining of formalin-fixed HeLa cells showing nucleolar localization. Kindly provided by Dr. Nobuaki Kikyo, Stem Cell Institute, University of Minnesota.

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.