

# NOP14 (S-17): sc-243624

## BACKGROUND

Nop14 (nucleolar protein 14), also known as NOL14, is a 857 amino acid nuclear protein that belongs to the NOP14 family. Existing as two alternatively spliced isoforms, Nop14 is a component of the ribosomal small subunit (SSU) processome. While it is involved in nucleolar processing of pre-18S ribosomal RNA, Nop14 also plays a role in the nuclear export of the 40S pre-ribosomal subunit to the cytoplasm. The gene that encodes Nop14 consists of about 25,459 bases and maps to human chromosome 4p16.3. Chromosome 4 represents approximately 6% of the human genome and contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is encoded by a gene that maps to chromosome 4. FGFR-3 is also encoded by a gene located on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

## REFERENCES

1. Bonaventure, J., et al. 1996. Common mutations in the fibroblast growth factor receptor 3 (FGFR 3) gene account for achondroplasia, hypochondroplasia, and thanatophoric dwarfism. *Am. J. Med. Genet.* 63: 148-154.
2. Kalchman, M.A., et al. 1996. Huntingtin is ubiquitinated and interacts with a specific ubiquitin-conjugating enzyme. *J. Biol. Chem.* 271: 19385-19394.
3. Howard, T.D., et al. 1997. Autosomal dominant postaxial polydactyly, nail dystrophy, and dental abnormalities map to chromosome 4p16, in the region containing the Ellis-van Creveld syndrome locus. *Am. J. Hum. Genet.* 61: 1405-1412.
4. Singhrao, S.K., et al. 1998. Huntingtin protein colocalizes with lesions of neurodegenerative diseases: An investigation in Huntington's, Alzheimer's, and Pick's diseases. *Exp. Neurol.* 150: 213-222.
5. Krakow, D., et al. 2000. Exclusion of the Ellis-van Creveld region on chromosome 4p16 in some families with asphyxiating thoracic dystrophy and short-rib polydactyly syndromes. *Eur. J. Hum. Genet.* 8: 645-648.

## CHROMOSOMAL LOCATION

Genetic locus: NOP14 (human) mapping to 4p16.3; Nop14 (mouse) mapping to 5 B2.

## SOURCE

NOP14 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NOP14 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-243624 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

NOP14 (S-17) is recommended for detection of NOP14 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); non cross-reactive with other Nop family members.

NOP14 (S-17) is also recommended for detection of NOP14 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NOP14 siRNA (h): sc-89219, Nop14 siRNA (m): sc-150030, NOP14 shRNA Plasmid (h): sc-89219-SH, Nop14 shRNA Plasmid (m): sc-150030-SH, NOP14 shRNA (h) Lentiviral Particles: sc-89219-V and Nop14 shRNA (m) Lentiviral Particles: sc-150030-V.

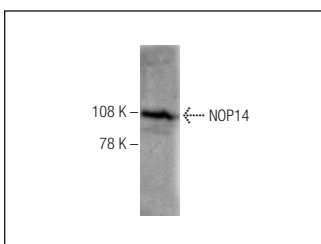
Molecular Weight of NOP14 isoforms: 98/91 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

## 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



NOP14 (S-17): sc-243624. Western blot analysis of NOP14 expression in HeLa nuclear extract.

## STORAGE

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

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Try **Nop14 (B-5): sc-398763** or **Nop14 (C-3): sc-398724**, our highly recommended monoclonal alternatives to NOP14 (S-17).