

Nop14 (B-5): sc-398763



The Power to Question

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. Bonaventura, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Nop14 (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-138 within an internal region of NOP14 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nop14 (B-5) is available conjugated to agarose (sc-398763 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398763 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398763 PE), fluorescein (sc-398763 FITC), Alexa Fluor® 488 (sc-398763 AF488), Alexa Fluor® 546 (sc-398763 AF546), Alexa Fluor® 594 (sc-398763 AF594) or Alexa Fluor® 647 (sc-398763 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398763 AF680) or Alexa Fluor® 790 (sc-398763 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398763 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

Nop14 (B-5) is recommended for detection of NOP14 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

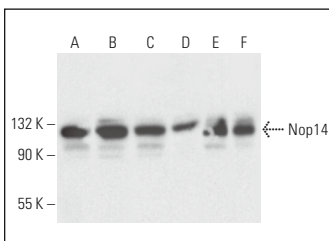
Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or Jurkat nuclear extract: sc-2132.

RECOMMENDED SUPPORT REAGENTS

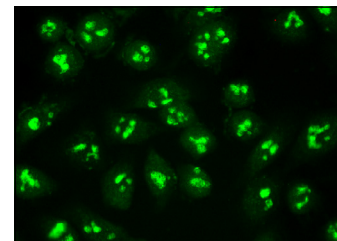
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Nop14 (B-5): sc-398763. Western blot analysis of Nop14 expression in HeLa (A), Jurkat (B), RT-4 (C) and U-251-MG (D) whole cell lysates and HeLa (E) and Jurkat (F) nuclear extracts.



Nop14 (B-5): sc-398763. Immunofluorescence staining of formalin-fixed SW480 cells showing nucleolar localization.

STORAGE

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

PROTOCOLS

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

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