

Nop25 (E-2): sc-374257

BACKGROUND

Nop25, also known as NOL12 (nucleolar protein 12) is a 213 amino acid protein that localizes to the nucleolus and is thought to bind to 28S rRNA, possibly playing a role in the processing of rRNA molecules and in the subsequent assembly and maturation of ribosomes. The gene encoding Nop25 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. *Chromosome 22. Genet. Test.* 2: 89-97.
2. Schwab, S.G., et al. 1999. Chromosome 22 workshop report. *Am. J. Med. Genet.* 88: 276-278.
3. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. *J. Med. Genet.* 41: 529-534.

CHROMOSOMAL LOCATION

Genetic locus: NOL12 (human) mapping to 22q13.1; Nol12 (mouse) mapping to 15 E1.

SOURCE

Nop25 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 141-171 within an internal region of Nop25 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nop25 (E-2) is available conjugated to agarose (sc-374257 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374257 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374257 PE), fluorescein (sc-374257 FITC), Alexa Fluor® 488 (sc-374257 AF488), Alexa Fluor® 546 (sc-374257 AF546), Alexa Fluor® 594 (sc-374257 AF594) or Alexa Fluor® 647 (sc-374257 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374257 AF680) or Alexa Fluor® 790 (sc-374257 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374257 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

Nop25 (E-2) is recommended for detection of Nop25 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).

Nop25 (E-2) is also recommended for detection of Nop25 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Nop25 siRNA (h): sc-75946, Nop25 siRNA (m): sc-150032, Nop25 shRNA Plasmid (h): sc-75946-SH, Nop25 shRNA Plasmid (m): sc-150032-SH, Nop25 shRNA (h) Lentiviral Particles: sc-75946-V and Nop25 shRNA (m) Lentiviral Particles: sc-150032-V.

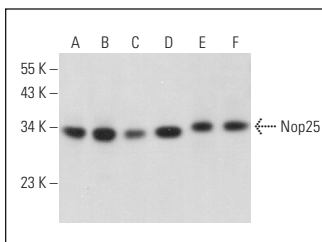
Molecular Weight of Nop25: 32 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HL-60 whole cell lysate: sc-2209 or HeLa whole cell lysate: sc-2200.

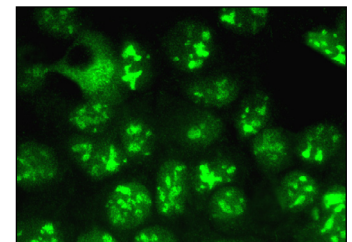
RECOMMENDED SUPPORT REAGENTS

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



Nop25 (E-2): sc-374257. Western blot analysis of Nop25 expression in HeLa (A), K-562 (B), HL-60 (C), NIH/3T3 (D), KNRK (E) and PC-12 (F) whole cell lysates.



Nop25 (E-2): sc-374257. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar and nuclear localization.

SELECT PRODUCT CITATIONS

1. Pinho, M., et al. 2019. NOL12 repression induces nucleolar stress-driven cellular senescence and is associated with normative aging. *Mol. Cell. Biol.* 39: e00099-19.

STORAGE

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