

NHPX (L-12): sc-86759

BACKGROUND

NHPX, also known as NHP2L1 (NHP2 non-histone chromosome protein 2-like 1), FA-1, 15.5K, OTK27, SNU13, SPAG12 or SNRNP15-5, is a 128 amino acid protein belonging to the ribosomal protein L7Ae family. NHPX localizes to the nucleus, mainly concentrated in the dense fibrillar component of the nucleolus. Ubiquitously expressed, NHPX binds to the 5'-stem-loop of U4 snRNA and may be involved in the late stage of spliceosome assembly. Following RNA binding, NHPX undergoes a conformational change and is recruited to introns, where NHPX is required for the subsequent recruitment of PRPF31 and the activation of the spliceosome complex. NHPX is expressed as two isoforms produced by alternative splicing.

REFERENCES

1. Vidovic, I., et al. 2000. Crystal structure of the spliceosomal 15.5kD protein bound to a U4 snRNA fragment. *Mol. Cell* 6: 1331-1342.
2. Leung, A.K. and Lamond, A.I. 2002. *In vivo* analysis of NHPX reveals a novel nucleolar localization pathway involving a transient accumulation in splicing speckles. *J. Cell Biol.* 157: 615-629.
3. Scherl, A., et al. 2002. Functional proteomic analysis of human nucleolus. *Mol. Biol. Cell* 13: 4100-4109.
4. 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.
5. Naz, R.K. and Zhu, X. 2002. Molecular cloning and sequencing of cDNA encoding for human FA-1 antigen. *Mol. Reprod. Dev.* 63: 256-268.
6. Zhou, Z., et al. 2002. Comprehensive proteomic analysis of the human spliceosome. *Nature* 419: 182-185.
7. Andersen, J.S., et al. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.
8. Soss, S.E. and Flynn, P.F. 2007. Functional implications for a prototypical K-turn binding protein from structural and dynamical studies of 15.5K. *Biochemistry* 46: 14979-14986.
9. McKeegan, K.S., et al. 2007. A dynamic scaffold of pre-snoRNP factors facilitates human box C/D snoRNP assembly. *Mol. Cell. Biol.* 27: 6782-6793.

CHROMOSOMAL LOCATION

Genetic locus: NHP2L1 (human) mapping to 22q13.2.

SOURCE

NHPX (L-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NHPX of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86759 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NHPX (L-12) is recommended for detection of NHPX of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NHPX (L-12) is also recommended for detection of NHPX in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NHPX siRNA (h): sc-75913, NHPX shRNA Plasmid (h): sc-75913-SH and NHPX shRNA (h) Lentiviral Particles: sc-75913-V.

Molecular Weight of NHPX: 15.5 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.