SANTA CRUZ BIOTECHNOLOGY, INC.

NHPX (N-14): sc-86760

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The Power to Question

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

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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; Nhp2l1 (mouse) mapping to 15 E1.

SOURCE

NHPX (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of NHPX of human origin.

STORAGE

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

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-86760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NHPX (N-14) is recommended for detection of NHPX 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).

NHPX (N-14) 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 siRNA (m): sc-149964, NHPX shRNA Plasmid (h): sc-75913-SH, NHPX shRNA Plasmid (m): sc-149964-SH, NHPX shRNA (h) Lentiviral Particles: sc-75913-V and NHPX shRNA (m) Lentiviral Particles: sc-149964-V.

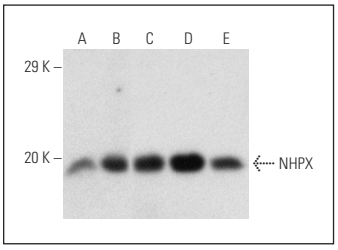
Molecular Weight of NHPX: 16 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Jurkat nuclear extract: sc-2132 or SW480 nuclear extract: sc-2155.

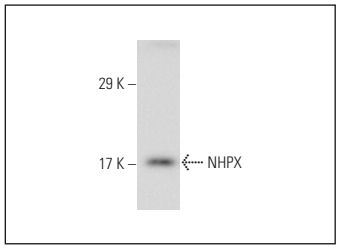
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



NHPX (N-14): sc-86760. Western blot analysis of NHPX expression in Jurkat (**A**), Hep G2 (**B**), SW480 (**C**), HeLa (**D**) and MCF7 (**E**) nuclear extracts.



NHPX (N-14): sc-86760. Western blot analysis of NHPX expression in Jurkat whole cell lysate.

RESEARCH USE

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