

# NPA1 (Y-18): sc-83345

## BACKGROUND

NPA1 (nucleolar pre-ribosomal-associated protein 1), also known as URB1, is a 2,271 amino acid protein that is homologous to the *S. cerevisiae* protein URB1. The *S. cerevisiae* URB1 is a nucleolar protein involved in the normal accumulation of 25S and 5.8S rRNAs and may also play a role in the biosynthesis of the 60S ribosomal unit. Also localized to the nucleolus, NPA1 is thought to have the same functions as *S. cerevisiae* URB1. NPA1 is expressed at highest levels in kidney, heart, brain, lung, spleen, testis, pancreas, skeletal muscle, ovary and prostate, with lowest levels in small intestine and thymus.

## REFERENCES

- Nagase, T., Ishikawa, K., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 31-39.
- Slavov, D., Hattori, M., Sakaki, Y., Rosenthal, A., Shimizu, N., Minoshima, S., Kudoh, J., Yaspo, M.L., Ramser, J., Reinhardt, R., Reimer, C., Clancy, K., Rynditch, A. and Gardiner, K. 2000. Criteria for gene identification and features of genome organization: analysis of 6.5 Mb of DNA sequence from human chromosome 21. Gene 247: 215-232.
- Nakajima, D., Okazaki, N., Yamakawa, H., Kikuno, R., Ohara, O. and Nagase, T. 2002. Construction of expression-ready cDNA clones for KIAA genes: manual curation of 330 KIAA cDNA clones. DNA Res. 9: 99-106.
- Scherl, A., Coute, Y., Deon, C., Calle, A., Kindbeiter, K., Sanchez, J.C., Greco, A., Hochstrasser, D. and Diaz, J.J. 2002. Functional proteomic analysis of human nucleolus. Mol. Biol. Cell. 13: 4100-4109.
- Dez, C., Froment, C., Noaillac-Depeyre, J., Monsarrat, B., Caizergues-Ferrer, M. and Henry, Y. 2004. NPA1p, a component of very early pre-60S ribosomal particles, associates with a subset of small nucleolar RNPs required for peptidyl transferase center modification. Mol. Cell. Biol. 24: 6324-6337.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608865. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: URB1 (human) mapping to 21q22.11.

## SOURCE

NPA1 (Y-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NPA1 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-83345 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

NPA1 (Y-18) is recommended for detection of NPA1 of 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).

NPA1 (Y-18) is also recommended for detection of NPA1 in additional species, including equine, canine and bovine.

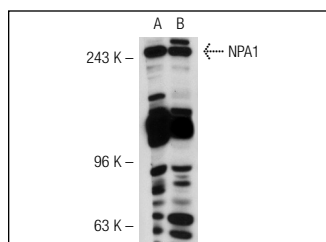
Molecular Weight of NPA1: 254 kDa.

Positive Controls: SW480 nuclear extract: sc-2155 or K-562 nuclear extract: sc-2130.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



NPA1 (Y-18): sc-83345. Western blot analysis of NPA1 expression in SW480 (A) and K-562 (B) nuclear extracts.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.