

# NPA1 (S-18): sc-83343

## 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

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. Online Mendelian Inheritance in Man, OMIM™. 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 (S-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-83343 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 (S-18) is recommended for detection of NPA1 of human and rat 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 (S-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™ 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.

## 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.