SANTA CRUZ BIOTECHNOLOGY, INC.

NOB1P (T-14): sc-160594

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The Power to Question

BACKGROUND

NOB1P, also known as ART-4 and phosphorylation regulatory protein HP-10, is a 412 amino acid nuclear protein that is involved in proteosome biogenesis and is required for the final step in 18S rRNA maturation. NOB1P contains a PIN domain, which functions as a nuclease in nonsense-mediated mRNA decay and is required for pre-rRNA cleavage. NOB1P interacts with Rent2, which is involved in nonsense-mediated decay of mRNAs containing premature stop codons. Expressed in placenta, spleen, endothelial cells, liver and lung, NOB1P is essential for the synthesis of 40S ribosome subunits. Supression of the gene encoding NOB1P inhibits the processing of the 20S pre-rRNA to the mature 18S rRNA, therefore leading to accumulation of high levels of 20S pre-rRNA with degradation intermediates.

REFERENCES

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3. Tone, Y. and Toh-E, A. 2002. NOB1P is required for biogenesis of the 26S proteasome and degraded upon its maturation in *Saccharomyces cerevisiae*. Genes Dev. 16: 3142-3157.
4. Schäfer, T., et al. 2003. The path from nucleolar 90S to cytoplasmic 40S pre-ribosomes. EMBO J. 22: 1370-1380.
5. Fatica, A., Oeffinger, M., Dlaki , M. and Tollervey, D. 2003. NOB1P is required for cleavage of the 3' end of 18S rRNA. Mol. Cell. Biol. 23: 1798-1807.
6. Lehner, B. and Sanderson, C.M. 2004. A protein interaction framework for human mRNA degradation. Genome Res. 14: 1315-1323.
7. Fatica, A., et al. 2004. PIN domain of NOB1P is required for D-site cleavage in 20S pre-rRNA. RNA 10: 1698-1701.
8. Zhang, Y., et al. 2005. Cloning, expression and characterization of the human NOB1 gene. Mol. Biol. Rep. 32: 185-189.
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CHROMOSOMAL LOCATION

Genetic locus: NOB1 (human) mapping to 16q22.1; Nob1 (mouse) mapping to 8 D3.

SOURCE

NOB1P (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NOB1P 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 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160594 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NOB1P (T-14) is recommended for detection of NOB1P 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).

NOB1P (T-14) is also recommended for detection of NOB1P in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NOB1P siRNA (h): sc-93114, NOB1P siRNA (m): sc-150014, NOB1P shRNA Plasmid (h): sc-93114-SH, NOB1P shRNA Plasmid (m): sc-150014-SH, NOB1P shRNA (h) Lentiviral Particles: sc-93114-V and NOB1P shRNA (m) Lentiviral Particles: sc-150014-V.

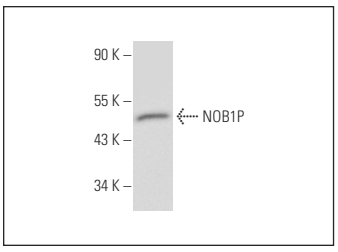
Molecular Weight of NOB1P: 50 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, JAR cell lysate: sc-2276 or c4 whole cell lysate: sc-364186.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NOB1P (T-14): sc-160594. Western blot analysis of NOB1P expression in NIH/3T3 nuclear extract.

RESEARCH USE

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