SANTA CRUZ BIOTECHNOLOGY, INC.

NAB4 (yN-15): sc-13931

BACKGROUND

Cleavage and polyadenylation of mRNA 3'ends in *Saccharomyces cerevisiae* requires several factors, one of which is cleavage factor I (CF I). CF I contains five subunits, Rna14, Rna15, Pcf11, Clp1, and Hrp1 (also designated NAB4 and CFIB). The nonsense-mediated mRNA decay (NMD) pathway regulated premature translation termination and degrades aberrant mRNAs. NAB4, a 73 kDa heterogeneous ribonucleoprotein, is a downstream sequence element (DSE)-binding factor that activates NMD. Mutations in NAB4 stabilize nonsense-containing transcripts without affecting the decay of wild type mRNAs. NAB4 binds specifically to a DSE-containing RNA and interacts with Upf1p, a component of a surveillance complex, which searches 3' of a nonsense condon for a DSE associated with RNA-binding proteins. Kap104p is a *S. cerevisiae* nuclear import receptor for both NAB2 and NAB4. NAB4 is post-translationally modified by methylation at arginine residues, which occurs prior to protein-RNA binding in the nucleus. Hmt1p methylates both Np13p and NAB4, which are shuttling hnRNPs involved in mRNA processing and export.

REFERENCES

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2. Shen, E.C., Henry, M.F., Weiss, V.H., Valentini, S.R., Silver, P.A., and Lee, M.S. 1998. Arginine methylation facilitates the nuclear export of hnRNP proteins. Genes Dev. 12: 679-691.
3. Lee, D.C. and Aitchison, J.D. 1999. Kap104p-mediated nuclear import. Nuclear localization signals in mRNA-binding proteins and the role of Ran and Rna. J. Biol. Chem. 274: 29031-29037.
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5. Komarnitsky, P., Cho, E.J., and Buratowski, S. 2000. Different phosphorylated forms of RNA polymease II and associated mRNA processing factors during transcription. Genes Dev. 14: 2452-2460.
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SOURCE

NAB4 (yN-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NAB4 of *Saccharomyces cerevisiae* 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-13931 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NAB4 (yN-15) is recommended for detection of NAB4 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

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.