SANTA CRUZ BIOTECHNOLOGY, INC.

Arn1 (yN-20): sc-26177

The Power to Question

BACKGROUND

The budding yeast *Saccharomyces cerevisiae* responds to growth when there are limiting amounts of iron by activating the transcription factor Aft1 and expressing a set of genes that ameliorate the effects of iron deprivation. Many of the iron and AFT1-regulated genes assist in the uptake of siderophore-bound iron from the environment. Siderophores are small iron-binding molecules that are synthesized and secreted in the iron-free form by microorganisms. *Saccharomyces cerevisiae* takes up iron bound to siderophores by two separate systems, one of which requires the ARN family of siderophore-iron transporters. Arn transporters, Arn1 and Arn3, are expressed in intracellular vesicles that correspond to the endosomal compartment. In the absence of its specific substrate, ferrichrome, Arn1 is sorted directly from the Golgi to the endosomal compartment and does not cycle to the plasma membrane.

REFERENCES

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2. Philpott, C.C., Protchenko, O., Kim, Y.W., Boretsky, Y. and Shakoury-Elizeh, M. 2002. The response to iron deprivation in *Saccharomyces cerevisiae*: expression of siderophore-based systems of iron uptake. Biochem. Soc. Trans. 30: 698-702.
3. Kim, Y., Yun, C.W. and Philpott, C.C. 2002. Ferrichrome induces endosome to plasma membrane cycling of the ferrichrome transporter, Arn1p, in *Saccharomyces cerevisiae*. EMBO J. 21: 3632-3642.
4. Hu, C.J., Bai, C., Zheng, X.D., Wang, Y.M. and Wang, Y.2002. Characterization and functional analysis of the siderophore-iron transporter CaArn1p in *Candida albicans*. J. Biol. Chem. 277: 30598-30605.
5. Heymann, P., Gerads, M., Schaller, M., Dromer, F., Winkelmann, G. and Ernst, J.F. 2002. The siderophore iron transporter of *Candida albicans* (Sit1p/Arn1p) mediates uptake of ferrichrome-type siderophores and is required for epithelial invasion. Infect. Immun. 70: 5246-5255.

SOURCE

Arn1 (yN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Arn1 of *Saccharomyces cerevisiae* origin.

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-26177 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Arn1 (yN-20) is recommended for detection of Arn1 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.