SANTA CRUZ BIOTECHNOLOGY, INC.

Rgt1 (yN-20): sc-28050

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glucose, nature's most abundant monosaccharide, regulates the expression of genes involved in its own metabolism in yeast via multiple signal transduction pathways. Two transmembrane sensors, Snf3 and Rgt2, trigger signalling in response to extracellular glucose, the end result of which is expression of the HXT gene family, a group of genes encoding hexose permeases, which then allow transport of glucose into the cell. In the absence of glucose, Rgt1 binds the promotor region of HXT genes via a consensus binding site (sequence 5'-CGGANNA-3') to repress transcription. However, in the presence of glucose, Rgt1 becomes phosphorylated, releasing th HXT promotor, and thereby inducing the uptake of glucose via the HXT family.

REFERENCES

1. Mosley, A.L., et al. 2003. Glucose-mediated phosphorylation converts the transcription factor Rgt1 from a repressor to an activator. J. Biol. Chem. 278: 10322-10327.
2. Flick, K.M., et al. 2003. Grr1-dependent inactivation of Mth1 mediates glucose-induced dissociation of Rgt1 from HXT gene promoters. Mol. Biol. Cell 14: 3230-3241.
3. Kim, J.H., et al. 2003. Specificity and regulation of DNA binding by the yeast glucose transporter gene repressor Rgt1. Mol. Cell. Biol. 23: 5208-5216.
4. Lakshmanan, J., et al. 2003. Repression of transcription by Rgt1 in the absence of glucose requires Std1 and Mth1. Curr. Genet. 44: 19-25.

SOURCE

Rgt1 (yN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rgt1 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-28050 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.

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.

APPLICATIONS

Rgt1 (yN-20) is recommended for detection of Rgt1 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.