SANTA CRUZ BIOTECHNOLOGY, INC.

Spt7 (yK-17): sc-26260

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Normal transcription of a large number of genes requires the *S. cerevisiae* SAGA complex which has three core subunits, Spt7, Spt20 and Ada1. Spt7 is crucial for controlling the levels of the other core subunits and assembly of the complex. Spt7 is a negatively charged, 1,332 amino acid protein which contains a histone fold required for interaction of the Taf10 subunit of SAGA and a bromodomain found in many transcription factors. Spt7 directly associates with Spt8 making it possible for Spt8 to interact with the SAGA complex. Recruitment of TBP is diminished at a number of SAGA-dependent promoters in ada1δ, Spt7δ, and Spt20δ null mutants. Strains of *S. cerevisiae* which contain an Spt7 null mutation are viable but grow very slowly and have transcriptional defects at many loci including insertion mutations, Ty elements, the INO1 gene and the MFA1 gene. These defects are similar to those caused by certain mutations in the SPT15 gene which encodes the TATA binding protein (TBP), indicating that the Spt7 protein plays an important role in transcription initiation *in vivo*.

REFERENCES

1. Gansheroff, L.J., Dollard, C., Tan, P. and Winston, F. 1995. The *Saccharomyces Cerevisiae* SPT7 gene encodes a very acidic protein important for transcription *in vivo*. Genetics 139: 523-536.
2. Nishimura, K., Yasumura, K., Igarashi, K., Harashima, S. and Kakinuma, Y. 1999. Transcription of some PHO genes in *Saccharomyces Cerevisiae* is regulated by Spt7p. Yeast 15: 1711-1717.
3. Sterner, D.E., Grant, P.A., Roberts, S.M., Duggan, L.J., Belotserkovskaya, R., Pacella, L.A., Winston, F., Workman, J.L. and Berger, S.L. 1999. Functional organization of the yeast SAGA complex: distinct components involved in structural integrity, nucleosome acetylation, and TATA-binding protein interaction. Mol. Cell. Biol. 19: 86-98.
4. Wu, P.J. and Winston, F. 2002. Analysis of Spt7 function in the *Saccharomyces Cerevisiae* SAGA coactivator complex. Mol. Cell. Biol. 22: 5367-5379.
5. Bhaumik, S.R. and Green, M.R. 2002. Differential requirement of SAGA components for recruitment of TATA-box-binding protein to promoters in vivo. Mol. Cell. Biol. 22: 7365-7371.

SOURCE

Spt7 (yK-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Spt7 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-26260 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

Spt7 (yK-17) is recommended for detection of Spt7 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.