SANTA CRUZ BIOTECHNOLOGY, INC.

Brf1 (yC-17): sc-26203

The Power to Question

BACKGROUND

Brf1, a component of the *S. Cerevisiae* RNA polymerase III transcription factor, TFIIIB, functions in recruitment of RNA polymerase III to the promoter for multiple rounds of transcription. Brf1 precisely positions TFIIIB on the upstream promoter-less DNA by creating stable protein-protein interactions with TATA-binding protein (TBP), another component of TFIIIB. In addition, Brf1 stimulates opening of the promoter, demonstrated by the fact that a deletion in the N-terminal region of Brf1 blocks opening of the promoter past the transcriptional start site. The Ty3 retrovirus-like elements preferentially insert at the initiation sites of genes transcribed by RNA polymerase III. The Brf1 subunit mediates targeting of Ty3 elements to these genes and is necessary for their integration. Brf1 specifically binds to the C34 subunit of RNA polymerase III and the TAU135 subunit of TFIIIC.

REFERENCES

1. Kassavetis, G.A., Nguyen, S.T., Kobayashi, R., Kumar, A., Geiduschek, P., Pisano, M. 1995. Cloning, expression, and function of TFC5, the gene encoding the B" component of the *Saccharomyces cerevisiae* RNA polymerase III transcription factor TFIIIB. Proc. Natl. Acad. Sci. USA. 92: 9786-9790.
2. Whitehall, S.K., Kassavetis, G.A., Geiduschek, E.P. 1995. The symmetry of the yeast U6 RNA gene's TATA box and the orientation of the TATA-binding protein in yeast TFIIIB. Genes Dev. 9: 2974-2985.
3. Ishiguro, A., Kassavetis, G.A., Geiduschek, E.P. 2002. Essential roles of Bdp1, a subunit of RNA polymerase III initiation factor TFIIIB, in transcription and tRNA processing. Mol. Cell Biol. 22: 3264-3275.
4. Huang, Y., McGillicuddy, E., Weindel, M., Dong, S., Maraia, R.J. 2003. The fission yeast TFIIB-related factor limits RNA polymerase III to a TATA-dependent pathway of TBP recruitment. Nucleic Acids Res. 31: 2108-2116.
5. SWISS-PROT/TrEMBL (P29056). World Wide Web URL: http://www.expasy.ch/sprot

SOURCE

Brf1 (yC-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Brf1 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-26203 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.

APPLICATIONS

Brf1 (yC-17) is recommended for detection of Brf1 of *Saccaromyces 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.