SANTA CRUZ BIOTECHNOLOGY, INC.

SPT3 (C-20): sc-30867

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The *Saccharomyces cerevisiae* SAGA complex is a multifunctional coactivator that regulates transcription by RNA polymerase II. In yeast, SPT3 is a component of the multiprotein SPT-ADA-GCN5 acetyltransferase (SAGA) complex that integrates proteins with transcription coactivator/adaptor functions, histone acetyltransferase activity, and core promoter-selective functions involving interactions with the TATA-binding protein. The human STAGA complex contains homologs of most yeast SAGA components. STAGA has acetyl coenzyme A-dependent transcriptional coactivator functions from a chromatin-assembled template *in vitro* and associates in HeLa cells with spliceosome-associated proteins. Amino acid sequence comparisons between human SPT3 and its counterparts in yeast reveal three highly conserved domains, with the most conserved 92-amino acid N-terminal domain being 25% identical with human TAFII18.

REFERENCES

1. Collart, M.A. 1996. The NOT, SPT3, and MOT1 genes functionally interact to regulate transcription at core promoters. Mol. Cell. Biol. 16: 6668-6676.
2. Martinez, E., et al. 1998. A human SPT3-TAFII31-GCN5-L acetylase complex distinct from transcription factor IID. J. Biol. Chem. 273: 23781-23785.
3. Yu, J., et al. 1998. Characterization of a human homologue of the *Saccharomyces cerevisiae* transcription factor spt3 (SUPT3H). Genomics 53: 90-96.
4. Birck, C., et al. 1998. Human TAF(II)28 and TAF(II)18 interact through a histone fold encoded by atypical evolutionary conserved motifs also found in the SPT3 family. Cell 94: 239-249.
5. Belotserkovskaya, R., et al. 2000. Inhibition of TATA-binding protein function by SAGA subunits Spt3 and Spt8 at Gcn4-activated promoters. Mol. Cell. Biol. 20: 634-647.
6. Martinez, E., et al. 2001. Human STAGA complex is a chromatin-acetylating transcription coactivator that interacts with pre-mRNA splicing and DNA damage-binding factors *in vivo*. Mol. Cell. Biol. 21: 6782-6795.
7. Wu, P.Y., et al. 2004. Molecular architecture of the *S. cerevisiae* SAGA complex. Mol. Cell 15: 199-208.
8. Topalidou, I., et al. 2004. Spt3 and Mot1 cooperate in nucleosome remodeling independently of TBP recruitment. EMBO J. 23: 1943-1948.

CHROMOSOMAL LOCATION

Genetic locus: SUPT3H (human) mapping to 6p21.1; Supt3h (mouse) mapping to 17 B3.

SOURCE

SPT3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SPT3 of human 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-30867 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SPT3 (C-20) is recommended for detection of SPT3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPT3 (C-20) is also recommended for detection of SPT3 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SPT3 siRNA (h): sc-106787, SPT3 siRNA (m): sc-153801, SPT3 shRNA Plasmid (h): sc-106787-SH, SPT3 shRNA Plasmid (m): sc-153801-SH, SPT3 shRNA (h) Lentiviral Particles: sc-106787-V and SPT3 shRNA (m) Lentiviral Particles: sc-153801-V.

Molecular Weight of SPT3: 44/36/37 kDa.

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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.