



Spt4 (yF-20): sc-26353

BACKGROUND

Spt4, a *Saccharomyces Cerevisiae* RNA polymerase II (RNAP II) elongation factor, belongs to the DSIF complex, which also includes Spt5 (1). The DSIF complex regulates transcription elongation by mediating interactions between RNAPII and nucleosomes. The DSIF complex also plays a positive role in transcription elongation in conjunction with the Paf1 and FACT complexes. In addition to elongation, Spt4 mediates transcription-coupled repair of UV-induced DNA damage. Full transcription of lacZ genes, long and GC-rich DNA sequences requires Spt4. When DNA damage is persistent, the absence of Spt4 leads to a delayed loss of transcription, suggesting that Spt4 is directly involved in mediating transcription shutdown. The activity of Spt4 and 5 depends upon the length of the C-terminal domain (CTD) of RNAPII, the presence of certain phosphoreceptors within the CTD, and the function of at least three CTD kinases.

REFERENCES

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2. Lindstrom, D.L., Hartzog, G.A. 2001. Genetic interactions of Spt4-Spt5 and TFIIIS with the RNA Polymerase II CTD and CTD modifying enzymes in *Saccharomyces cerevisiae*. *Genetics*. 159: 487-497.
3. Squazzo, S.L., Costa, P.J., Lindstrom, D.L., Kumer, K.E., Simic, R., Jennings, J.L., Link, A.J., Arndt, K.M., Hartzog, G.A. 2002. The Paf1 complex physically and functionally associates with transcription elongation factors *in vivo*. *EMBO J.* 21: 1764-1774.
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5. Jansen, L.E., Belo, A.I., Hulsker, R., Brouwer, J. 2002. Transcription elongation factor Spt4 mediates loss of phosphorylated RNA polymerase II transcription in response to DNA damage. *Nucleic Acids Res.* 30: 3532-3539.
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SOURCE

Spt4 (yF-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Spt4 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-26353 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Spt4 (yF-20) is recommended for detection of Spt4 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.

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.