SPT4 (yN-16): *sc-26352*

BACKGROUND

SPT4 (also designated Suppressor of Ty4 and p14) and SPT5 (also designated DSIF p160) are highly conserved proteins from yeast to humans (1). Nuclear SPT4 and SPT5 (2) are involved in both DRB (5,6-dichloro-1-beta-D-ribofuranosylbenzimidazole)-mediated transcriptional inhibition as well as the activation of transcriptional elongation by the HIV-1 protein Tat (3). SPT4 binds SPT5 to form the DSIF (DRB-sensitivity-inducing factor) complex, which binds RNA polymerase II and directly regulates elongation (4). SPT4, which maps to human chromosome 17 (1,5), has a molecular mass of 14 kDa, and SPT5 has a molecular mass of 160 kDa (6). However, SPT5 protein in mitotic HeLa cells migrates more slowly on SDS-PAGE than does SPT5 isolated from interphase cells, as a result of enhanced SPT5 phosphorylation (3). The C-terminal CTR1 domain of SPT5 is the substrate for P-TEFb phosphorylation, which is critical for SPT5 function as a regulator of transcriptional elongation (3,4).

SOURCE

SPT4 (yN-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the amino terminus of SPT4 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml PBS containing 0.1% sodium azide and 0.2% gelatin.

Blocking peptide is available for competition studies (sc-26352 P) (100 µg peptide in 0.5 ml PBS with 0.1% sodium azide and 100 µg BSA).

SPECIFICITY

SPT4 (yN-16) is recommended for the detection of SPT4 of *Saccharomyces cerevisiae* origin by Western blotting.

Recommended dilution range for Western blot analysis: 1:100-1:1000. Recommended starting dilution: 1:100.

STORAGE

Store at 4° C, do not freeze; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

BACKGROUND REFERENCES

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2. Ivanov, D., Kwak, Y.T., Guo, J., and Gaynor, R.B. 2000. Domains in the SPT5 protein that modulate its transcriptional regulatory properties. Mol. Cell. Biol. 20: 2970-2983.

3. Wada, T., Takagi, T., Yamaguchi, Y., Watanabe, D., and Handa, H. 1998. Evidence that P-TEFb alleviates the negative effect of DSIF on RNA polymerase II-dependent transcription *in vitro*. EMBO J. 17: 7395-7403.

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5. Yamaguchi, Y., Wada, T., Watanabe, D., Takagi, T., Hasegawa, J., and Handa, H. 1999. Structure and function of the human transcription elongation factor DSIF. J. Biol. Chem. 274: 8085-8092.

6. Wada, T., Takagi, T., Yamaguchi, Y., Ferdous, A., Imai, T., Hirose, S., Sugimoto, S., Yano, K., Hartzog, G.A., Winston, F., Buratowski, S., and Handa, H. 1998. DSIF, a novel transcription elongation factor that regulates RNA polymerase II processivity, is composed of human Spt4 and Spt5 homologs. Genes Dev. 12: 343-356.

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