

SPT5 (H-300): sc-28678

BACKGROUND

SPT4 (also designated suppressor of Ty4 and p14) and SPT5 (also designated DSIF p160) are highly conserved proteins from yeast to humans. Nuclear SPT4 and SPT5 are involved in both DRB (5,6-dichloro-1-β-D-ribofuranosylbenzimidazole)-mediated transcriptional inhibition as well as the activation of transcriptional elongation by the HIV-1 protein Tat. SPT4 binds SPT5 to form the DSIF (DRB-sensitivity-inducing factor) complex, which binds RNA polymerase II and directly regulates elongation. 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. 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.

CHROMOSOMAL LOCATION

Genetic locus: SUPT5H (human) mapping to 19q13.2; Supt5h (mouse) mapping to 7 A3.

SOURCE

SPT5 (H-300) is a rabbit polyclonal antibody raised against amino acids 61-360 mapping near the N-terminus of SPT5 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-28678 X, 200 µg/0.1 ml.

APPLICATIONS

SPT5 (H-300) is recommended for detection of SPT5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPT5 (H-300) is also recommended for detection of SPT5 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for SPT5 siRNA (h): sc-38440, SPT5 siRNA (m): sc-38441, SPT5 shRNA Plasmid (h): sc-38440-SH, SPT5 shRNA Plasmid (m): sc-38441-SH, SPT5 shRNA (h) Lentiviral Particles: sc-38440-V and SPT5 shRNA (m) Lentiviral Particles: sc-38441-V.

SPT5 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular weight of SPT5: 160 kDa.

Positive Controls: CCRF-CEM nuclear extract: sc-2146, HeLa whole cell lysate: sc-2200 or DU 145 nuclear extract: sc-24960.

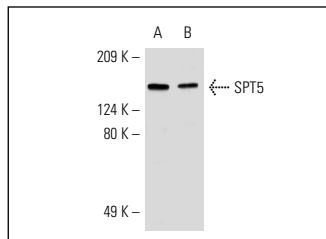
RESEARCH USE

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

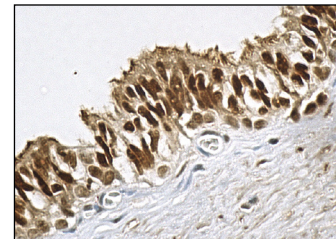
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



SPT5 (H-300): sc-28678. Western blot analysis of SPT5 expression in CCRF-CEM (A) and DU 145 (B) nuclear extracts.



SPT5 (H-300): sc-28678. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts.

SELECT PRODUCT CITATIONS

- Larochelle, S., et al. 2006. Dichotomous but stringent substrate selection by the dual-function Cdk7 complex revealed by chemical genetics. *Nat. Struct. Mol. Biol.* 13: 55-62.
- Zhang, Z., et al. 2007. Transcription termination factor Pcf11 limits the processivity of Pol II on an HIV provirus to repress gene expression. *Genes Dev.* 21: 1609-1614.
- Rodríguez-Paredes, M., et al. 2009. The chromatin remodeling factor CHD8 interacts with elongating RNA polymerase II and controls expression of the cyclin E2 gene. *Nucleic Acids Res.* 37: 2449-2460.
- Baugh, J.M., et al. 2009. Proteasomes can degrade a significant proportion of cellular proteins independent of ubiquitination. *J. Mol. Biol.* 386: 814-827.
- Kininis, M., et al. 2009. Postrecruitment regulation of RNA polymerase II directs rapid signaling responses at the promoters of estrogen target genes. *Mol. Cell. Biol.* 29: 1123-1133.
- Bender, M.A., et al. 2012. The hypersensitive sites of the murine β-globin locus control region act independently to affect nuclear localization and transcriptional elongation. *Blood* 119: 3820-3827.
- Wang W., et al. 2013. Mediator MED23 regulates basal transcription *in vivo* via an interaction with P-TEFb. *Transcription* 4: 39-51.
- Salem, T., et al. 2013. Chromatin loop organization of the junb locus in mouse dendritic cells. *Nucleic Acids Res.* E-published.



Try **SPT5 (D-3): sc-133217** or **SPT5 (D-10): sc-390961**, our highly recommended monoclonal alternatives to SPT5 (H-300).