

SPT6 (E-4): sc-393920

BACKGROUND

SPT6 (suppressor of Ty6 homolog), also known as SUPT6H, SPT6H, Tat-CT2 (Tat-cotransactivator 2 protein) or emb-5 in *C. elegans*, is a 1,726 amino acid protein that is highly conserved from yeast to humans. Expressed ubiquitously, SPT6 localizes to the nucleus and contains one SH2 domain and one S1 domain. SPT6 participates in both DRB (5,6-dichloro-1-β-D-ribofuranosylbenzimidazole)-mediated transcriptional inhibition as well as the enhancement of transcriptional elongation by the RNA polymerase II (Pol II). SPT6 interacts with the nuclear proteins SPT4 and SPT5, which comprise the DSIF (DRB-sensitivity-inducing factor) complex that binds RNA polymerase II, and directly regulates elongation. Via its C-terminus, SPT6 can also interact with Histone H3. Due to alternative splicing events, three isoforms exist for SPT6.

REFERENCES

- Segre, J.A., et al. 1995. Positional cloning of the nude locus: genetic, physical, and transcription maps of the region and mutations in the mouse and rat. *Genomics* 28: 549-559.
- Chiang, P.W., et al. 1996. Identification and analysis of the human and murine putative chromatin structure regulator SUPT6H and Supt6h. *Genomics* 34: 328-333.
- Chiang, P.W., et al. 1996. Isolation, sequencing, and mapping of the human homologue of the yeast transcription factor, SPT5. *Genomics* 38: 421-424.

CHROMOSOMAL LOCATION

Genetic locus: SUPT6H (human) mapping to 17q11.2; Supt6 (mouse) mapping to 11 B5.

SOURCE

SPT6 (E-4) is a mouse monoclonal antibody raised against amino acids 1001-1227 mapping within an internal region of SPT6 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPT6 (E-4) is available conjugated to agarose (sc-393920 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393920 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393920 PE), fluorescein (sc-393920 FITC), Alexa Fluor[®] 488 (sc-393920 AF488), Alexa Fluor[®] 546 (sc-393920 AF546), Alexa Fluor[®] 594 (sc-393920 AF594) or Alexa Fluor[®] 647 (sc-393920 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393920 AF680) or Alexa Fluor[®] 790 (sc-393920 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

SPT6 (E-4) is recommended for detection of SPT6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPT6 (E-4) is also recommended for detection of SPT6 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SPT6 siRNA (h): sc-93909, SPT6 siRNA (m): sc-153802, SPT6 shRNA Plasmid (h): sc-93909-SH, SPT6 shRNA Plasmid (m): sc-153802-SH, SPT6 shRNA (h) Lentiviral Particles: sc-93909-V and SPT6 shRNA (m) Lentiviral Particles: sc-153802-V.

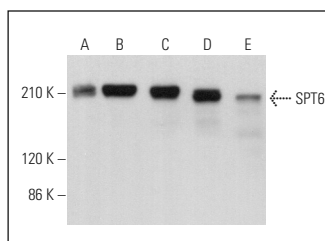
Molecular Weight of SPT6: 199 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or HeLa nuclear extract: sc-2120.

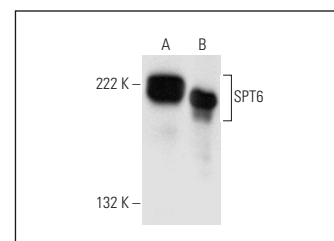
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



SPT6 (E-4): sc-393920. Western blot analysis of SPT6 expression in Jurkat (A), A-431 (B), SK-BR-3 (C), NIH/3T3 (D) and PC-12 (E) whole cell lysates.



SPT6 (E-4): sc-393920. Western blot analysis of SPT6 expression in Jurkat whole cell lysate (A) and HeLa nuclear extract (B).

SELECT PRODUCT CITATIONS

- Oqani, R.K., et al. 2019. Iws1 and SPT6 regulate trimethylation of Histone H3 on lysine 36 through Akt signaling and are essential for mouse embryonic genome activation. *Sci. Rep.* 9: 3831.
- Song, J., et al. 2022. Regulation of alternative polyadenylation by the C₂H₂-zinc-finger protein Sp1. *Mol. Cell* 82: 3135-3150.e9.

RESEARCH USE

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