

SPT16 (N-17): sc-5912

BACKGROUND

Expression of protein-coding genes requires the association of specific transcription factors, RNA polymerase and various accessory factors. These accessory factors are distinguished as either histone acetyltransferases or ATP-dependent chromatin-remodeling enzymes, which include FACT (for facilitates chromatin transcription), and they facilitate transcription initiation on DNA packaged into chromatin. FACT is a chromatin-specific elongation factor required for transcription of chromatin templates, and it specifically interacts with nucleosomes and histone H2A/H2B dimers, to promote nucleosome disassembly upon transcription. FACT represents a complex between SPT16, a homologue of the *Saccharomyces cerevisiae* Spt16/Cdc68 protein, and the high-mobility group (HMG)-1-like protein structure-specific recognition protein-1 (SSRP-1). Similar to other (HMG) domain containing proteins, which are characterized by their ability to bend target DNAs, SSRP1 and the murine ortholog T160, physically interact with serum response factors (SRF) and function as a positive co regulatory proteins involved in modulating SRF-dependent gene expression.

REFERENCES

1. Felsenfeld, G. 1992. Chromatin as an essential part of the transcriptional mechanism. *Nature* 355: 219-224.
2. Wittmeyer, J., and Formosa, T. 1997. The *Saccharomyces cerevisiae* DNA polymerase α catalytic subunit interacts with Cdc68/Spt16 and with Pob3, a protein similar to an HMG1-like protein. *Mol. Cell. Biol.* 17: 4178-4190.
3. Shilatifard, A. 1998. Factors regulating the transcriptional elongation activity of RNA polymerase II. *FASEB J.* 12: 1437-1446.
4. Orphanides, G., et al. 1998. FACT, a factor that facilitates transcript elongation through nucleosomes. *Cell* 92: 105-116.
5. LeRoy, G., et al. 1998. Requirement of RSF and FACT for transcription of chromatin templates *in vitro*. *Science* 282: 1900-1904.

CHROMOSOMAL LOCATION

Genetic locus: SUPT16H (human) mapping to 14q11.2; Supt16h (mouse) mapping to 14 C1.

SOURCE

SPT16 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SPT16 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5912 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SPT16 (N-17) is recommended for detection of SPT16 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

SPT16 (N-17) is also recommended for detection of SPT16 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SPT16 siRNA (h): sc-37875, SPT16 siRNA (m): sc-37876, SPT16 shRNA Plasmid (h): sc-37875-SH, SPT16 shRNA Plasmid (m): sc-37876-SH, SPT16 shRNA (h) Lentiviral Particles: sc-37875-V and SPT16 shRNA (m) Lentiviral Particles: sc-37876-V.

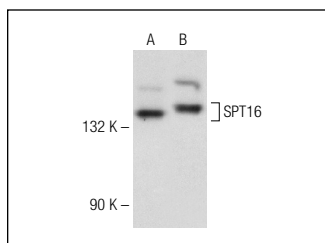
Molecular Weight of SPT16: 140 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or K-562 nuclear extract: sc-2130.

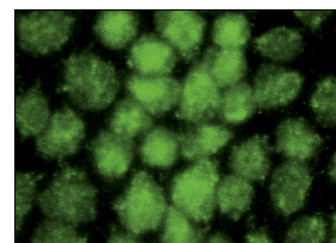
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SPT16 (N-17): sc-5912. Western blot analysis of SPT16 expression in K-562 (A) and Jurkat (B) nuclear extracts.



SPT16 (N-17): sc-5912. Immunofluorescence staining of methanol-fixed UV-treated HeLa showing nuclear localization.

RESEARCH USE

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



Try **SPT16 (D-3): sc-377028** or **SPT16 (H-4): sc-165989**, our highly recommended monoclonal alternatives to SPT16 (N-17).