

SPT16 (D-3): sc-377028

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., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: SUPT16H (human) mapping to 14q11.2; Supt16h (mouse) mapping to 14 C2.

SOURCE

SPT16 (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-29 at the N-terminus of SPT16 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPT16 (D-3) is available conjugated to agarose (sc-377028 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377028 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377028 PE), fluorescein (sc-377028 FITC), Alexa Fluor® 488 (sc-377028 AF488), Alexa Fluor® 546 (sc-377028 AF546), Alexa Fluor® 594 (sc-377028 AF594) or Alexa Fluor® 647 (sc-377028 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377028 AF680) or Alexa Fluor® 790 (sc-377028 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377028 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SPT16 (D-3) is recommended for detection of SPT16 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

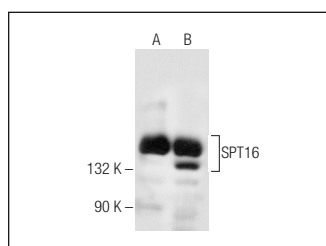
SPT16 (D-3) is also recommended for detection of SPT16 in additional species, including equine, canine, bovine and porcine.

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.

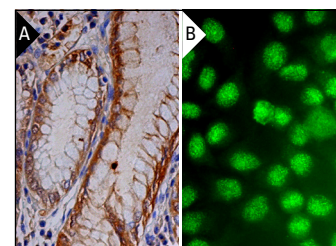
Molecular Weight of SPT16: 140 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or A-673 nuclear extract: sc-2128.

DATA



SPT16 (D-3): sc-377028. Western blot analysis of SPT16 expression in K-562 (A) and HeLa (B) nuclear extracts.



SPT16 (D-3): sc-377028. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic, membrane and nuclear staining of glandular cells (A). Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization (B).

SELECT PRODUCT CITATIONS

1. Evangeline Kang, T.Z., et al. 2021. The elevated transcription of ADAM19 by the oncohistone H2BE76K contributes to oncogenic properties in breast cancer. *J. Biol. Chem.* 296: 100374.

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 for detailed protocols and support products.

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