

SPT16 (m): 293T Lysate: sc-123762

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., LeRoy, G., Chang, C.H., Luse, D.S. and Reinberg, D. 1998. FACT, a factor that facilitates transcript elongation through nucleosomes. *Cell* 92: 105-116.
5. LeRoy, G., Orphanides, G., Lane, W.S. and Reinberg, D. 1998. Requirement of RSF and FACT for transcription of chromatin templates *in vitro*. *Science* 282: 1900-1904.
6. Dyer, M.A., Hayes, P.J. and Baron, M.H. 1998. The HMG domain protein SSRP1/PREIIBF is involved in activation of the human embryonic β -like globin gene. *Mol. Cell. Biol.* 18: 2617-2628.
7. Orphanides, G., Wu, W.H., Lane, W.S., Hampsey, M. and Reinberg, D. 1999. The chromatin-specific transcription elongation factor FACT comprises human SPT16 and SSRP1 proteins. *Nature* 400: 284-288.

CHROMOSOMAL LOCATION

Genetic locus: Supt16h (mouse) mapping to 14 C2.

PRODUCT

SPT16 (m): 293T Lysate represents a lysate of mouse SPT16 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

SPT16 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SPT16 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.