#12191 Store at -20°C

SPT16 (D7I2K) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #11198
Swiss-Prot Acc. #Q9Y5B9

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, ChIP Endogenous	H, M, R, Mk, (Hm, X, Z, B, Dg, Guinea Pig, Hr)	140 kDa	Rabbit IgG**

Background: Suppressor of Ty-16 (SPT16) and structure-specific recognition protein-1 (SSRP1) are subunits of the facilitates chromatin transcription (FACT) complex that is essential for transcription elongation (1,2). FACT facilitates RNA polymerase-dependent transcription of chromatin templates by destabilizing the nucleosomes within the open reading frames of active genes (3-5). FACT destabilizes the nucleosomes, which would otherwise act as barriers to RNA polymerase transcription activity, by disrupting histone-histone and histone-DNA contacts that lead to the eviction of the histone H2A-H2B dimer (2,3,6). FACT may also function as a histone chaperone to reassemble nucleosomes after RNA polymerase passage (7). In addition to transcription, FACT activity has been shown to have a role in DNA replication in yeast and in DNA repair by contributing to the activation of p53 by CK2 and by facilitating histone H2AX-H2B exchange upon DNA damage (8-10).

Specificity/Sensitivity: SPT16 (D7I2K) Rabbit mAb recognizes endogenous levels of total SPT16 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu662 of human SPT16 protein.

Background References:

(1) Winkler, D.D. and Luger, K. (2011) *J Biol Chem* 286, 18369-74.

(2) Orphanides, G. et al. (1999) *Nature* 400, 284-8.

(3) Orphanides, G. et al. (1998) *Cell* 92, 105-16.

(4) Birch, J.L. et al. (2009) *EMBO J* 28, 854-65.

(5) Orphanides, G. and Reinberg, D. (2000) *Nature* 407, 471-5.

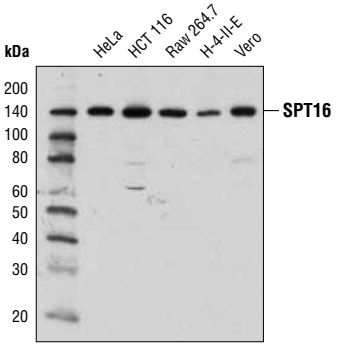
(6) Keller, D.M. and Lu, H. (2002) *J Biol Chem* 277, 50206-13.

(7) Belotserkovskaya, R. et al. (2003) *Science* 301, 1090-3.

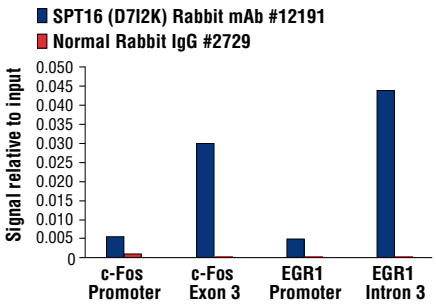
(8) Schlesinger, M.B. and Formosa, T. (2000) *Genetics* 155, 1593-606.

(9) Keller, D.M. and Lu, H. (2002) *J Biol Chem* 277, 50206-13.

(10) Heo, K. et al. (2008) *Mol Cell* 30, 86-97.



Western blot analysis of extracts from various cell lines using SPT16 (D7I2K) Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10^6 HCT 116 cells starved for 48 hr then serum stimulated with 20% FBS for 15 min and either 10 µl of SPT16 (D7I2K) Rabbit mAb or 2 µl of Normal Rabbit IgG #2729 using SimpleChIP® Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using SimpleChIP® Human c-Fos Promoter Primers #4663, SimpleChIP® Human c-Fos Exon 3 Primers #12010, SimpleChIP® Human EGR1 Promoter Primers #5549, and SimpleChIP® Human EGR1 Intron 3 Primers #11953. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Chromatin IP	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

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Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.