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SPT5 Antibody

Store at -20C
#9033

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	150	Rabbit	#O00267	6829

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

SPT5 Antibody recognizes endogenous levels of total SPT5 protein.

Species predicted to react based on 100% sequence homology

Hamster, Bovine, Dog, Horse, Guinea Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly803 of human SPT5 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

DRB-sensitivity inducing factor (DSIF), a heterodimer composed of SPT4 and SPT5, is capable of both facilitating and inhibiting RNA polymerase II (RNAPII) activity (1-3). DSIF, together with NELF (Negative Elongation Factor), inhibits RNAPII elongation, resulting in promoter proximal pausing of RNAPII as it awaits additional signaling to resume transcription (4). The release of promoter proximal pausing is signaled through phosphorylation of the RNAPII C-terminal domain (CTD) and NELF by positive transcription elongation factor (P-TEFb) (5). P-TEFb also phosphorylates SPT5 at Thr4 within the evolutionarily conserved heptapeptide repeat motif. This phosphorylation event switches DSIF from a transcriptional repressor to an activator where it becomes a critical factor for transcriptional elongation (6,7).

Background References

1. Wada, T. et al. (1998) *Genes Dev* 12, 343-56.
2. Saunders, A. et al. (2006) *Nat Rev Mol Cell Biol* 7, 557-67.
3. Gomes, N.P. et al. (2006) *Genes Dev* 20, 601-12.
4. Yamaguchi, Y. et al. (1999) *Cell* 97, 41-51.
5. Buratowski, S. (2009) *Mol Cell* 36, 541-6.
6. Wada, T. et al. (1998) *EMBO J* 17, 7395-403.
7. Yamada, T. et al. (2006) *Mol Cell* 21, 227-37.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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