

**TH1L (D5G6W) Rabbit mAb**

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP	H M R Mk	Endogenous	66	Rabbit IgG	#Q8IXH7	51497

**Product Usage Information**

For optimal ChIP results, use 5 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP<sup>®</sup> Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:100

**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.

**Specificity/Sensitivity**

TH1L (D5G6W) Rabbit mAb recognizes endogenous levels of total TH1L protein.

**Species predicted to react based on 100% sequence homology**

Hamster, Bovine, Dog, Horse

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala132 of human TH1L protein.

**Background**

Negative Elongation Factor (NELF) consists of four subunits: WHSC2 (NELF-A), COBRA-1 (NELF-B), TH1L (NELF-C/D), and NELF-E (1). NELF, together with DRB-sensitivity inducing factor (DSIF), inhibits RNA Polymerase II (RNAPII) elongation resulting in RNAPII promoter proximal pausing, where it waits additional signaling to resume transcription (2,3). The release of RNAPII from promoter proximal pausing is a critical regulatory point during transcription and is signaled by positive transcription elongation factor (p-TEF-b) phosphorylation of both NELF and the carboxy-terminal domain (CTD) within the largest subunit of RNAPII (3,4). WHSC2 is thought to connect the NELF complex to RNAPII machinery, while NELF-E contains an RNA binding motif that is necessary for NELF function (1,5,6). TH1L, together with COBRA-1, are integral subunits that bring WHSC2 and NELF-E together in the NELF complex (1).

**Background References**

- Narita, T. et al. (2003) *Mol Cell Biol* 23, 1863-73.
- Nechaev, S. and Adelman, K. (2011) *Biochim Biophys Acta* 1809, 34-45.
- Yamaguchi, Y. et al. (1999) *Cell* 97, 41-51.
- Buratowski, S. (2009) *Mol Cell* 36, 541-6.
- Yamaguchi, Y. et al. (2001) *Science* 293, 124-7.
- Yamaguchi, Y. et al. (2002) *Mol Cell Biol* 22, 2918-27.

**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 **IP:** Immunoprecipitation **ChIP:** Chromatin IP

**Cross-Reactivity Key**

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

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