Revision 1

Store at -20C

#5728

ELP3 (D5H12) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	62	Rabbit IgG	#Q9H9T3	55140

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

ELP3 (D5H12) Rabbit mAb recognizes endogenous levels of total ELP3 protein.

Species predicted to react based on 100% sequence homology

Hamster, Bovine, Dog, Pig, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly431 of human ELP3 protein.

Background

Elongator is a highly conserved transcription elongation factor complex that was first identified in yeast as part of the hyperphosphorylated RNA polymerase II (RNAPII) holoenzyme (1). The Elongator complex consists of 6 subunits, ELP1-6, and has been shown to have acetyltransferase activity (2). The acetylation targets of Elongator include histone H3, which is linked to the transcription elongation function of the complex, and α-tubulin, which is associated with regulation of migration and maturation of projection neurons (3-6).
ELP3 is the catalytic acetyltransferase subunit of the Elongator complex (2,3). ELP3 contains an iron-sulfur cluster that can bind S-adenosylmethionine, which is necessary for the structural integrity of the Elongator and has been shown to play an important role in mediating global zygotic DNA demethylation of the paternal genome post-fertilization (7-9).

Background References

1. Otero, G. et al. (1999) *Mol Cell* 3, 109-18.
2. Creppe, C. and Buschbeck, M. (2011) *J Biomed Biotechnol* 2011, 924898.
3. Wittschieben, B.O. et al. (1999) *Mol Cell* 4, 123-8.
4. Hawkes, N.A. et al. (2002) *J Biol Chem* 277, 3047-52.
5. Kim, J.H. et al. (2002) *Proc Natl Acad Sci USA* 99, 1241-6.
6. Creppe, C. et al. (2009) *Cell* 136, 551-64.
7. Paraskevopoulou, C. et al. (2006) *Mol Microbiol* 59, 795-806.
8. Greenwood, C. et al. (2009) *J Biol Chem* 284, 141-9.
9. Okada, Y. et al. (2010) *Nature* 463, 554-8.

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

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Limited Uses

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