

## PHF19 Antibody



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<b>Applications:</b> W, IP	<b>Reactivity:</b> H Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 70	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q5T6S3	<b>Entrez-Gene Id:</b> 26147
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:100

### 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

PHF19 Antibody recognizes endogenous levels of total PHF19 protein.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human PHF19 protein. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

PHD finger protein 19 (PHF19), also known as polycomb-like protein 3 (PCL3), is a polycomb group protein that functions as an accessory subunit of the polycomb repressor complex 2 (PRC2), which represses target gene expression through methylation of histone H3 at Lys27 by the EZH2 methyltransferase (1). PHF19 recruits PRC2 to target genes by binding trimethylated histone H3 Lys36, a mark of active chromatin, via its Tudor domain (2-4). PHF19 associates with PRC2 and the histone H3 Lys36 demethylases NO66 and FBXL10, and is required to recruit PRC2 and NO66/FBXL10 to stem cell genes during differentiation, resulting in PRC2-mediated trimethylation of histone H3 Lys27, loss of trimethylated histone H3 Lys36, and transcriptional silencing (2-4). Thus, PHF19 is critical for the proper transition of stem cell genes from the active to inactive state during differentiation of embryonic stem cells.

### Background References

1. Sauvageau, M. and Sauvageau, G. (2010) *Cell Stem Cell* 7, 299-313.
2. Brien, G.L. et al. (2012) *Nat Struct Mol Biol* 19, 1273-81.
3. Ballaré, C. et al. (2012) *Nat Struct Mol Biol* 19, 1257-65.
4. Cai, L. et al. (2013) *Mol Cell* 49, 571-82.

### 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** Human **Mk:** Monkey

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