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PHF1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20638a

Product Information

Application	WB, E
Primary Accession	O43189
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB48341
Calculated MW	62106

Additional Information

Gene ID	5252
Other Names	PHD finger protein 1, Protein PHF1, hPHF1, Polycomb-like protein 1, hPCl1, PHF1, PCL1
Target/Specificity	This PHF1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 164-197 amino acids from the N-terminal region of human PHF1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PHF1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PHF1
Synonyms	PCL1
Function	Polycomb group (PcG) that specifically binds histone H3 trimethylated at 'Lys-36' (H3K36me3) and recruits the PRC2 complex. Involved in DNA damage response and is recruited at double-strand breaks (DSBs). Acts by binding to

	H3K36me3, a mark for transcriptional activation, and recruiting the PRC2 complex: it is however unclear whether recruitment of the PRC2 complex to H3K36me3 leads to enhance or inhibit H3K27me3 methylation mediated by the PRC2 complex. According to some reports, PRC2 recruitment by PHF1 promotes H3K27me3 and subsequent gene silencing by inducing spreading of PRC2 and H3K27me3 into H3K36me3 loci (PubMed:18285464, PubMed:23273982). According to another report, PHF1 recruits the PRC2 complex at double-strand breaks (DSBs) and inhibits the activity of PRC2 (PubMed:23142980). Regulates p53/TP53 stability and prolonges its turnover: may act by specifically binding to a methylated from of p53/TP53.
Cellular Location	Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Localizes specifically to the promoters of numerous target genes. Localizes to double-strand breaks (DSBs) sites following DNA damage. Co-localizes with NEK6 in the centrosome
Tissue Location	Highest levels in heart, skeletal muscle, and pancreas, lower levels in brain, placenta, lung, liver and kidney

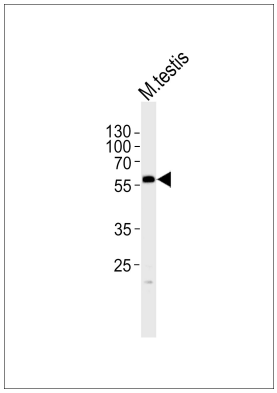
Background

Polycomb group (PcG) that specifically binds histone H3 trimethylated at 'Lys-36' (H3K36me3) and recruits the PRC2 complex. Involved in DNA damage response and is recruited at double-strand breaks (DSBs). Acts by binding to H3K36me3, a mark for transcriptional activation, and recruiting the PRC2 complex: it is however unclear whether recruitment of the PRC2 complex to H3K36me3 leads to enhance or inhibit H3K27me3 methylation mediated by the PRC2 complex. According to some reports, PRC2 recruitment by PHF1 promotes H3K27me3 and subsequent gene silencing by inducing spreading of PRC2 and H3K27me3 into H3K36me3 loci (PubMed:18285464 and PubMed:23273982). According to another report, PHF1 recruits the PRC2 complex at double-strand breaks (DSBs) and inhibits the activity of PRC2 (PubMed:23142980). Regulates p53/TP53 stability and prolonges its turnover: may act by specifically binding to a methylated from of p53/TP53.

References

Coulson M.,et al.Genomics 48:381-383(1998).
Wang J.H.,et al.Submitted (MAR-1998) to the EMBL/GenBank/DDBJ databases.
Mungall A.J.,et al.Nature 425:805-811(2003).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Micci F.,et al.Cancer Res. 66:107-112(2006).

Images



Western blot analysis of lysate from mouse testis tissue lysate, using PHF1 Antibody (N-term)(Cat. #AP20638a). AP20638a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.