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PHF8 Antibody

Rabbit mAb
Catalog # AP91527

Product Information

Application	WB, IF, ICC, IP
Primary Accession	Q9UPP1
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Histone lysine demethylase PHF8; MRXSSD; PHD finger protein 8; PHF8; ZNF422;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	117864

Additional Information

Dilution	WB 1:500~1:2000 ICC/IF 1:100~1:500 IP 1:70
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human PHF8
Description	Involved in cell cycle progression by being required to control G1-S transition. Acts as a coactivator of rDNA transcription, by activating polymerase I (pol I) mediated transcription of rRNA genes.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

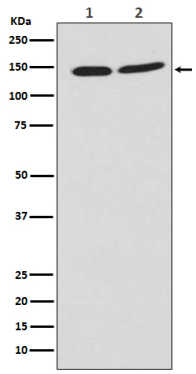
Name	PHF8
Synonyms	KDM7B {ECO:0000312|HGNC:HGNC:20672}, KIA
Function	Histone lysine demethylase with selectivity for mono- and dimethylated residues. It plays an essential role in cell cycle progression and rDNA transcription (PubMed:19843542, PubMed:20531378, PubMed:20548336, PubMed:20622854). Demethylates mono- and dimethylated histone H3 'Lys-9' residue (H3K9Me1 and H3K9Me2) and monomethylated histone H4 'Lys-20' residue (H4K20Me1). Acts as a transcription activator as H3K9Me1, H3K9Me2, H3K27Me2 and H4K20Me1 are epigenetic repressive marks (PubMed:20101266, PubMed:20208542, PubMed:20346720, PubMed:20622853, PubMed:20622854). Displays a very low intrinsic activity toward dimethylated H3 'Lys-27' (H3K27Me2) (PubMed:20346720). May also have weak activity toward dimethylated H3 'Lys-36' (H3K36Me2), however, the relevance of this result remains unsure in vivo (PubMed:19843542, PubMed:20023638, PubMed:20346720). Involved in cell cycle progression by

being required to control G1-S transition (PubMed:20622854). Acts as a coactivator of rDNA transcription, by activating polymerase I (pol I) mediated transcription of rRNA genes (PubMed:20531378). Specifically binds trimethylated 'Lys-4' of histone H3 (H3K4me3), affecting histone demethylase specificity: has weak activity toward H3K9Me2 in absence of H3K4me3, while it has high activity toward H3K9me2 when binding H3K4me3 (PubMed:20023638, PubMed:20346720, PubMed:20421419). Positively modulates transcription of histone demethylase KDM5C, acting synergistically with transcription factor ARX; synergy may be related to enrichment of histone H3K4me3 in regulatory elements (PubMed:31691806). Required for brain development, probably by regulating expression of neuron-specific genes (By similarity).

Cellular Location

Nucleus. Nucleus, nucleolus Note=Recruited to H3K4me3 sites on chromatin during interphase (PubMed:20622854). Dissociates from chromatin when cells enter mitosis (PubMed:20622854).

Images



Western blot analysis of PHF8 expression in (1) Jurkat cell lysate; (2) NIH/3T3 cell lysate.

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