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Anti-PHF8 Monoclonal Antibody

Catalog # ABO14506

Product Information

Application	WB, IF, ICC, IP
Primary Accession	Q9UPP1
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-PHF8 Monoclonal Antibody . Tested in WB, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	23133
Other Names	Histone lysine demethylase PHF8, 1.14.11.27, 1.14.11.65, PHD finger protein 8, [histone H3]-dimethyl-L-lysine(36) demethylase PHF8, [histone H3]-dimethyl-L-lysine(9) demethylase PHF8, PHF8, KIAA1111, ZNF422
Calculated MW	117864
Application Details	WB 1:500-1:2000 ICC/IF 1:100-1:500 IP 1:70
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ADAI-16
Immunogen	A synthesized peptide derived from human PHF8
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	PHF8
Synonyms	KDM7B {ECO:0000312|HGNC:HGNC:20672}, KIA

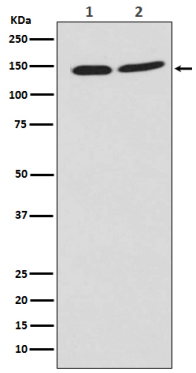
Function

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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