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PHF8 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP9276b

Specification

PHF8 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q9UPP1

PHF8 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 23133

Other Names
Histone lysine demethylase PHF8, PHD finger protein 8, PHF8, KIAA1111, ZNF422

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP9276b was selected from the C-term region of human PHF8. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PHF8 Antibody (C-term) Blocking Peptide - Protein Information

Name PHF8

Synonyms KIAA1111, ZNF422

Function
Histone lysine demethylase with selectivity for the di- and monomethyl states that plays a key role cell cycle progression, rDNA transcription and brain development. Demethylates mono- and dimethylated histone H3 'Lys-9' residue (H3K9Me1 and H3K9Me2), dimethylated H3 'Lys-27' (H3K27Me2) and monomethylated histone H4 'Lys- 20' residue (H4K20Me1). Acts as a transcription activator as H3K9Me1, H3K9Me2, H3K27Me2 and H4K20Me1 are epigenetic repressive marks. 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. Required for brain development, probably by regulating expression of neuron-specific genes. Only has activity toward H4K20Me1 when nucleosome is used as a substrate and when not histone octamer is used as substrate. May also have weak activity toward

dimethylated H3 'Lys-36' (H3K36Me2), however, the relevance of this result remains unsure in vivo. 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. 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.

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).

PHF8 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PHF8 Antibody (C-term) Blocking Peptide - Images

PHF8 Antibody (C-term) Blocking Peptide - Background

PHF8 is a histone lysine demethylase that preferentially acts on histones in the monomethyl or dimethyl states. The encoded protein requires Fe(2+) ion, 2-oxoglutarate, and oxygen for its catalytic activity. Defects in this protein are a cause of mental retardation syndromic X-linked Siderius type (MRXSSD).

PHF8 Antibody (C-term) Blocking Peptide - References

Feng,W., et.al., Nat. Struct. Mol. Biol. 17 (4), 445-450 (2010)Yue,W.W., et.al., FEBS Lett. 584 (4), 825-830 (2010)Yu,L., et.al., Cell Res. 20 (2), 166-173 (2010)