

**PHF8 Antibody (C-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP12259b****Specification**

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**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

**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**

The protein encoded by this gene 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 gene are a cause of mental retardation syndromic X-linked siderius type (MRXSSD). Four transcript variants encoding different isoforms have been found for this gene.

**PHF8 Antibody (C-term) Blocking peptide - References**

Liu, W., et al. Nature 466(7305):508-512(2010) Qi, H.H., et al. Nature 466(7305):503-507(2010) 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)