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PHF8 polyclonal antibody
Rabbit Polyclonal Antibody
Catalog # ABV11384

Specification

PHF8 polyclonal antibody - Product Information

Application	**E, WB**
Primary Accession	Q9UPP1
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**117864**

PHF8 polyclonal antibody - Additional Information

Gene ID 23133

Positive Control	**Western blot: mouse embryonic stem cells, ELISA: Peptides.**
Application & Usage	**Western Blot: 1:1000, ELISA: 1:100 – 1:500.**

Other Names
JHDM1F, MRXSSD, ZNF422

Target/Specificity
PHF8

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
In PBS with 0.05% sodium azide and 0.05% ProClin 300.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
PHF8 polyclonal antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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PHF8 polyclonal antibody - 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.

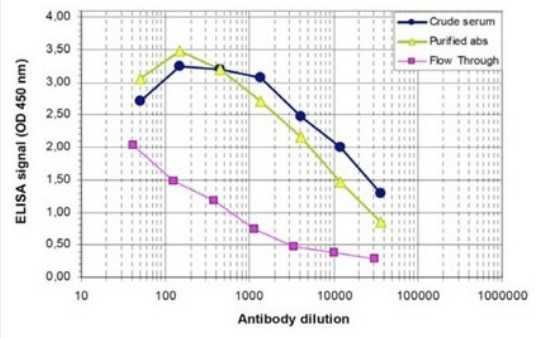
Cellular Location
Nucleus. Nucleus, nucleolus Note=Recruited to H3K4me3 sites on chromatin during interphase (PubMed:20622854). Dissociates from chromatin when cells enter mitosis (PubMed:20622854).

PHF8 polyclonal antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PHF8 polyclonal antibody - Images



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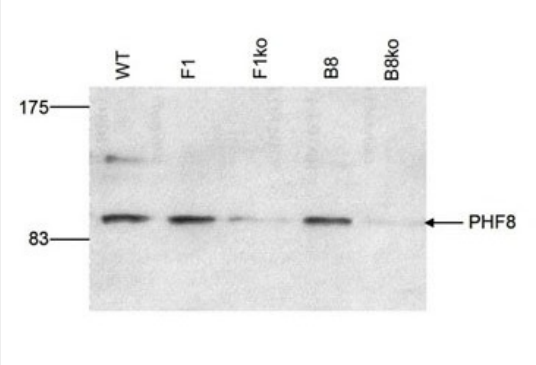
To determine the titer of the antibody, an ELISA was performed using a serial dilution of the antibody directed crude serum and Flow through in antigen coated wells. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:6,500.



E14TG2A mouse embryonic stem cells were transfected with a conditional allele of PHF8. Nuclear extracts (135 µg) from wild type cells (WT) and from 2 clones (F1, B8) with an active and a targeted allele (F1ko, B8ko), respectively, were analysed by Western blot using the antibody. The antibody was diluted 1:1,000. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

PHF8 polyclonal antibody - Background

PHD finger protein 8 is a Jumonji domain containing protein. Like other members of the jumonji family, PHF8 may therefore play a role in histone demethylation. Mutations in PHF8 lead to Siderius type X-linked mental retardation (MRXSSD), a mild to borderline type of mental retardation.