abcam

Product datasheet

Anti-PHF8 antibody ab84779

1 References 2 Images

Overview

Product name	Anti-PHF8 antibody
Description	Rabbit polyclonal to PHF8
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rabbit, Horse, Cow, Dog, Pig, Chimpanzee, Ferret, Rhesus monkey, Gorilla, Orangutan, Elephant
Immunogen	Synthetic peptide corresponding to a region between residue 650 and 700 of human PHF8 (CAI41576.1).
Positive control	Human controls: Breast Carcinoma, Colon Carcinoma, Pancreatic Islet Cell Tumor, Prostate Carcinoma, Stomach Adenocarcinoma Mouse control: Teratoma
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	ab84779 was affinity purified using an epitope specific to PHF8 immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab84779 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/500.

Target

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.

Involvement in disease Defects in PHF8 are the cause of mental retardation syndromic X-linked Siderius type (MRXSSD) [MIM:300263]. A disorder characterized by mild to borderline mental retardation with or without cleft lip/cleft palate.

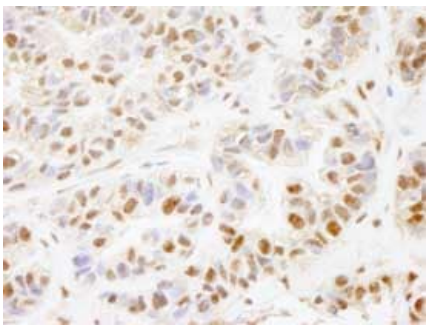
Sequence similarities Belongs to the JHDM1 histone demethylase family. JHDM1D subfamily.
Contains 1 JmjC domain.
Contains 1 PHD-type zinc finger.

Domain The PHD-type zinc finger mediates the binding to H3K4me3. Binding to H3K4me3 promotes its access to H3K9me2.
The linker region is a critical determinant of demethylase specificity. It enables the active site of JmjC to reach the target H3K9me2 when the PHD-type zinc finger binds to H3K4me3.

Post-translational modifications Phosphorylation at Ser-69 and Ser-120 are required for dissociation from chromatin and accumulation of H4K20Me1 levels during prophase.

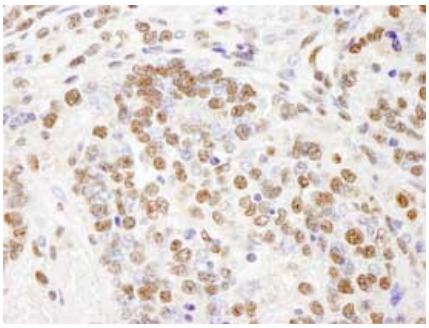
Cellular localization Nucleus. Nucleus > nucleolus. Recruited to H3K4me3 sites on chromatin during interphase. Dissociates from chromatin when cells enter mitosis.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHF8 antibody (ab84779)

ab84779, at a 1/100 dilution, staining PHF8 in formalin fixed, paraffin embedded human breast carcinoma by Immunohistochemistry using DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PHF8 antibody (ab84779)

ab84779, at a 1/100 dilution, staining PHF8 in formalin fixed, paraffin embedded mouse teratoma by Immunohistochemistry using DAB staining.

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