abcam

Product datasheet

Recombinant human PHF8 protein (Active) ab271713

画像数 2

製品の詳細

製品名 Recombinant human PHF8 protein (Active)

生理活性 Specific Activity: 0.013 pmol/min/μg.

精製度 >= 60 % SDS-PAGE.

Affinity purified.

発現系 Baculovirus infected Sf9 cells

アクセッション番号 Q9UPP1

タンパク質長 Full length protein

Animal free No

由来 Recombinant

生物種 Human

予測される分子量 120 kDa including tags

領域 2 to 1060

DDDDK tag N-Terminus

特性

Our **Abpromise guarantee** covers the use of **ab271713** in the following tested applications.

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

アプリケーション Functional Studies

SDS-PAGE

製品の状態 Liquid

前処理および保存

保存方法および安定性 Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle.

pH: 8.00

Constituents: 0.63% Tris HCI, 0.64% Sodium chloride, 0.02% Potassium chloride, 0.04% Tween,

20% Glycerol (glycerin, glycerine)

80 µg/ml DDDDK peptide

関連情報

機能

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.

関連疾患

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.

配列類似性

Belongs to the JHDM1 histone demethylase family. JHDM1D subfamily.

Contains 1 JmjC domain.

Contains 1 PHD-type zinc finger.

ドメイン

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.

翻訳後修飾

Phosphorylation at Ser-69 and Ser-120 are required for dissociation from chromatin and $\,$

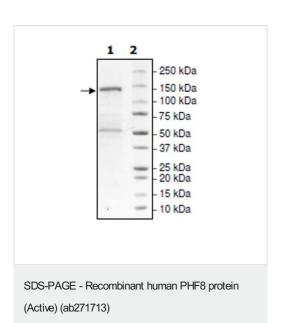
accumulation of H4K20Me1 levels during prophase.

細胞内局在

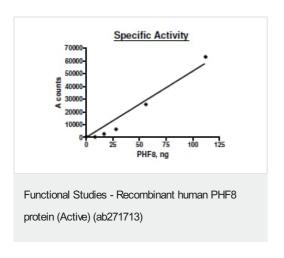
Nucleus, Nucleus > nucleolus, Recruited to H3K4me3 sites on chromatin during interphase.

Dissociates from chromatin when cells enter mitosis.

画像



SDS-PAGE analysis of 2 µg ab271713.



Specific activity of ab271713 was 0.013 pmol/min/µg.

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