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# PHF5A Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13500b

## Product Information

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|---|---|
| **Application** | FC, WB, E |
| **Primary Accession** | Q7RTV0 |
| **Other Accession** | P83871, P83870, NP_116147.1 |
| **Reactivity** | Human |
| **Predicted** | Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB33425 |
| **Calculated MW** | 12405 |
| **Antigen Region** | 81-110 |

## Additional Information

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| **Gene ID** | 84844 |
| **Other Names** | PHD finger-like domain-containing protein 5A, PHD finger-like domain protein 5A, Splicing factor 3B-associated 14 kDa protein, SF3b14b, PHF5A |
| **Target/Specificity** | This PHF5A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 81-110 amino acids from the C-terminal region of human PHF5A. |
| **Dilution** | FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | PHF5A Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | PHF5A |
| **Function** | Component of the 17S U2 SnRNP complex of the spliceosome, a large ribonucleoprotein complex that removes introns from transcribed pre-mRNAs |

(PubMed:12234937, PubMed:27720643, PubMed:28541300, PubMed:32494006, PubMed:34822310). The 17S U2 SnRNP complex (1) directly participates in early spliceosome assembly and (2) mediates recognition of the intron branch site during pre-mRNA splicing by promoting the selection of the pre-mRNA branch-site adenosine, the nucleophile for the first step of splicing (PubMed:12234937, PubMed:32494006, PubMed:34822310). Within the 17S U2 SnRNP complex, PHF5A is part of the SF3B subcomplex, which is required for 'A' complex assembly formed by the stable binding of U2 snRNP to the branchpoint sequence in pre-mRNA (PubMed:12234937, PubMed:27720643). Sequence independent binding of SF3A and SF3B subcomplexes upstream of the branch site is essential, it may anchor U2 snRNP to the pre-mRNA (PubMed:12234937). Also acts as a component of the minor spliceosome, which is involved in the splicing of U12-type introns in pre-mRNAs (PubMed:15146077, PubMed:33509932). Also involved in elongation by RNA polymerase II as part of the PAF1 complex (PAF1C) (By similarity). PAF1C is required for maintenance of embryonic stem cell (ESC) self- renewal and cellular reprogramming of stem cells (By similarity). Maintains pluripotency by recruiting and stabilizing PAF1C on pluripotency genes loci, and by regulating the expression of the pluripotency genes (By similarity). Regulates the deposition of elongation-associated histone modifications, including dimethylated histone H3 'Lys-79' (H3K79me2) and trimethylated histone H3 'Lys-36' (H3K36me3), on PAF1C targets, self-renewal and pluripotency genes (By similarity). Regulates RNA polymerase II promoter-proximal pause release of the PAF1C targets and self-renewal genes, and the levels of elongating ('Ser-2' phosphorylated) RNA polymerase II in their gene bodies (By similarity). Regulates muscle specification in adult stem cells by stabilizing PAF1C in chromatin to promote myogenic differentiation (By similarity). Acts as a transcriptional regulator by binding to the GJA1/Cx43 promoter and enhancing its up-regulation by ESR1/ER-alpha (By similarity).

**Cellular Location** Nucleus. Nucleus speckle {ECO:0000250|UniProtKB:P83870}

## Background

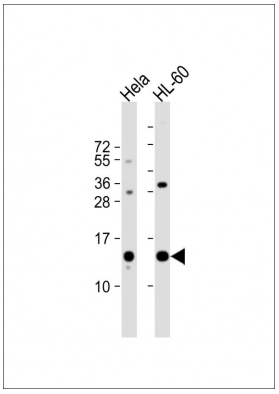
This gene encodes a subunit of the splicing factor 3b protein complex. Splicing factor 3b, together with splicing factor 3a and a 12S RNA unit, forms the U2 small nuclear ribonucleoproteins complex (U2 snRNP). The splicing factor 3b/3a complex binds pre-mRNA upstream of the intron's branch site in a sequence-independent manner and may anchor the U2 snRNP to the pre-mRNA. The protein encoded by this gene contains a PHD-finger-like domain that is flanked by highly basic N- and C-termini. This protein belongs to the PHD-finger superfamily and may act as a chromatin-associated protein. This gene has several pseudogenes on different chromosomes.

## References

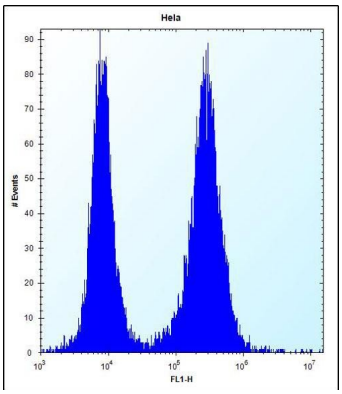
Kuwasako, K., et al. Proteins 71(4):1617-1636(2008)
Will, C.L., et al. RNA 10(6):929-941(2004)
Collins, J.E., et al. Genome Biol. 5 (10), R84 (2004) :
Will, C.L., et al. EMBO J. 21(18):4978-4988(2002)
Zhou, Z., et al. Nature 419(6903):182-185(2002)

## Images

All lanes : Anti-PHF5A Antibody (C-term) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat




Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 12 kDa Blocking/Dilution buffer: 5% NFDM/TBST.




PHF5A Antibody (C-term) (Cat. #AP13500b) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated donkey-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.