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PAF1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17025b

Product Information

Application	WB, E
Primary Accession	Q8N7H5
Other Accession	Q4V886, Q8K2T8, Q2KJ14, NP_061961.2
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36801
Calculated MW	59976
Antigen Region	439-467

Additional Information

Gene ID	54623
Other Names	RNA polymerase II-associated factor 1 homolog, hPAF1, Pancreatic differentiation protein 2, PAF1, PD2
Target/Specificity	This PAF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 439-467 amino acids from the C-terminal region of human PAF1.
Dilution	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	PAF1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PAF1
Synonyms	PD2

Function	Component of the PAF1 complex (PAF1C) which has multiple functions during transcription by RNA polymerase II and is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. PAF1C associates with RNA polymerase II through interaction with POLR2A CTD non-phosphorylated and 'Ser-2'- and 'Ser- 5'-phosphorylated forms and is involved in transcriptional elongation, acting both independently and synergistically with TCEA1 and in cooperation with the DSIF complex and HTATSF1. PAF1C is required for transcription of Hox and Wnt target genes. PAF1C is involved in hematopoiesis and stimulates transcriptional activity of KMT2A/MLL1; it promotes leukemogenesis through association with KMT2A/MLL1-rearranged oncoproteins, such as KMT2A/MLL1-MLLT3/AF9 and KMT2A/MLL1-MLLT1/ENL. PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3). PAF1C recruits the RNF20/40 E3 ubiquitin-protein ligase complex and the E2 enzyme UBE2A or UBE2B to chromatin which mediate monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1); UB2A/B-mediated H2B ubiquitination is proposed to be coupled to transcription. PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors. In case of infection by influenza A strain H3N2, PAF1C associates with viral NS1 protein, thereby regulating gene transcription. Connects PAF1C with the RNF20/40 E3 ubiquitin-protein ligase complex. Involved in polyadenylation of mRNA precursors. Has oncogenic activity in vivo and in vitro.
Cellular Location	Nucleus. Note=Punctuate distribution throughout the nucleus except in nucleoli and the perinuclear chromatin

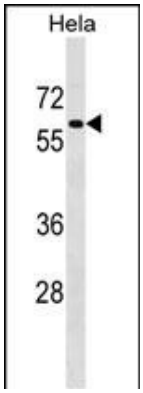
Background

PAF1, parafibromin (CDC73; MIM 607393), LEO1 (MIM 610507), and CTR9 (MIM 609366) form the PAF protein complex that associates with the RNA polymerase II subunit POLR2A (MIM 180660) and with a histone methyltransferase complex (Rozenblatt-Rosen et al., 2005 [PubMed 15632063]). The PAF complex also has a role in histone monoubiquitination (Zhu et al., 2005 [PubMed 16307923]).[supplied by OMIM].

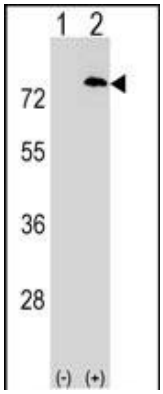
References

Muntean, A.G., et al. Cancer Cell 17(6):609-621(2010)
Kim, J., et al. Cell 140(4):491-503(2010)
Moniaux, N., et al. PLoS ONE 4 (9), E7077 (2009) :
Olsen, J.V., et al. Cell 127(3):635-648(2006)
Moniaux, N., et al. Oncogene 25(23):3247-3257(2006)

Images



PAF1 Antibody (C-term) (Cat. #AP17025b) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the PAF1 antibody detected the PAF1 protein (arrow).



Western blot analysis of PAF1 (arrow) using rabbit polyclonal PAF1 Antibody (C-term) (Cat. #AP17025b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PAF1 gene.