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CDC73 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9181C

Product Information

Application	WB, IF, IHC-P, FC, E
Primary Accession	Q6P1J9
Other Accession	Q4V8C8, Q8JZM7, Q5ZLM0
Reactivity	Human, Rat, Mouse
Predicted	Chicken, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23239
Calculated MW	60577
Antigen Region	132-161

Additional Information

Gene ID	79577
Other Names	Parafibromin, Cell division cycle protein 73 homolog, Hyperparathyroidism 2 protein, CDC73, C1orf28, HRPT2
Target/Specificity	This CDC73 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 132-161 amino acids from the Central region of human CDC73.
Dilution	WB~~1:2000 IF~~1:10~50 IHC-P~~1:100~500 FC~~1:10~50 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	CDC73 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDC73
Synonyms	C1orf28, HRPT2

Function	Tumor suppressor probably involved in transcriptional and post-transcriptional control pathways. May be involved in cell cycle progression through the regulation of cyclin D1/PRAD1 expression. 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 cleavage and polyadenylation specificity factor (CPSF) complex and the cleavage stimulation factor (CSTF) complex, and with Wnt signaling. Involved in polyadenylation of mRNA precursors.
Cellular Location	Nucleus
Tissue Location	Found in adrenal and parathyroid glands, kidney and heart.

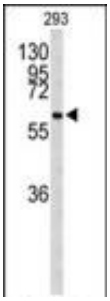
Background

CDC73 encodes a tumor suppressor that is involved in transcriptional and post-transcriptional control pathways. The protein is a component of the the PAF protein complex, which associates with the RNA polymerase II subunit POLR2A and with a histone methyltransferase complex. This protein appears to facilitate the association of 3' mRNA processing factors with actively-transcribed chromatin.

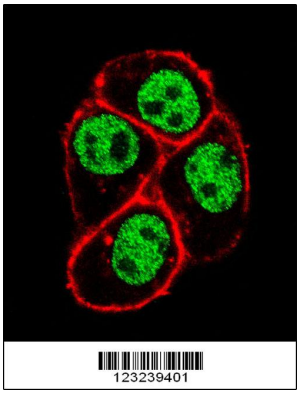
References

Vierimaa,O., et.al., J. Endocrinol. Invest. 32 (6), 512-518 (2009)
Hahn,M.A., et.al., J. Endocrinol. 201 (3), 387-396 (2009)

Images



Western blot analysis of CDC73 Antibody (Center) (Cat. #AP9181c) in 293 cell line lysates (35ug/lane). CDC73 (arrow) was detected using the purified Pab.



Confocal immunofluorescent analysis of CDC73 Antibody (Center)(Cat#AP9181c) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).

Citations

- Characteristics and functions of glyceraldehyde 3-phosphate dehydrogenase S-nitrosylation during controlled aging of elm and Arabidopsis seeds