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WDR61 Antibody

Catalog # ASC11859

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9GZS3
Other Accession	NP_079510, 13376840
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	33581
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	WDR61 antibody can be used for detection of WDR61 by Western blot at 1 - 2 g/ml. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	80349
Other Names	WD repeat-containing protein 61, Meiotic recombination REC14 protein homolog, SKI8 homolog, Ski8, WD repeat-containing protein 61, N-terminally processed, WDR61
Target/Specificity	WDR61; WDR61 antibody is human, mouse and rat reactive.
Reconstitution & Storage	WDR61 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	WDR61 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SKIC8 (HGNC:30300)
Synonyms	WDR61
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 (PubMed:16307923, PubMed:19952111, PubMed:20178742). 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 (PubMed:16307923, PubMed:19952111, PubMed:20178742). PAF1C is required for transcription of Hox and Wnt target genes (PubMed:16307923, PubMed:19952111, PubMed:20178742). 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 (PubMed:16307923, PubMed:19952111, PubMed:20178742). PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3) (PubMed:16307923, PubMed:19952111, PubMed:20178742). 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 (PubMed:16307923, PubMed:19952111, PubMed:20178742). PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors (PubMed:16307923, PubMed:19952111, PubMed:20178742). In case of infection by influenza A strain H3N2, PAF1C associates with viral NS1 protein, thereby regulating gene transcription (PubMed:16307923, PubMed:19952111, PubMed:20178742). Required for mono- and trimethylation on histone H3 'Lys-4' (H3K4me3), dimethylation on histone H3 'Lys-79' (H3K4me3). Required for Hox gene transcription (PubMed:16307923, PubMed:19952111, PubMed:20178742). Also acts as a component of the SKI complex, a multiprotein complex that assists the RNA-degrading exosome during the mRNA decay and quality-control pathways (PubMed:16024656, PubMed:32006463, PubMed:35120588). The SKI complex catalyzes mRNA extraction from 80S ribosomal complexes in the 3'-5' direction and channels mRNA to the cytosolic exosome for degradation (PubMed:32006463, PubMed:35120588). SKI-mediated extraction of mRNA from stalled ribosomes allow binding of the Pelota-HBS1L complex and subsequent ribosome disassembly by ABCE1 for ribosome recycling (PubMed:32006463).

Cellular Location Nucleus. Cytoplasm

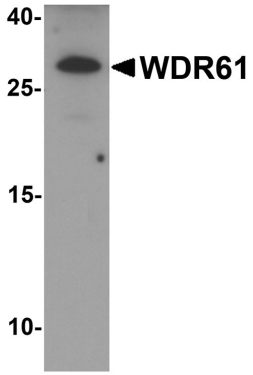
Background

WDR61 (WD-repeat-containing protein 61), also known as SKI8 or REC14, is a subunit of the human PAF and SKI complexes, which function in transcriptional regulation and are involved in events downstream of RNA synthesis, such as RNA surveillance (1,2). PAF1C is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. Component of the SKI complex which is thought to be involved in exosome-mediated RNA decay and associates with transcriptionally active genes in a manner dependent on PAF1C (3,4).

References

Zhu B, Mandal SS, Pham AD, et al. The human PAF complex coordinates transcription with events downstream of RNA synthesis. Genes Dev. 2005; 19:1668-73.
Zhu B, Zheng Y, Pham AD, et al. Monoubiquitination of human histone H2B: the factors involved and their roles in HOX gene regulation. Mol. Cell. 2005; 20:601-11.
Kim J, Guermah M, and Roeder RG. The human PAF1 complex acts in chromatin transcription elongation both independently and cooperatively with SII/TFIIS. Cell 2010; 140:491-503.
Chen Y, Yamaguchi Y, Tsugeno Y, et al. DSIF, the Paf1 complex, and Tat-SF1 have nonredundant, cooperative roles in RNA polymerase II elongation. Genes Dev. 2009; 23):2765-77.

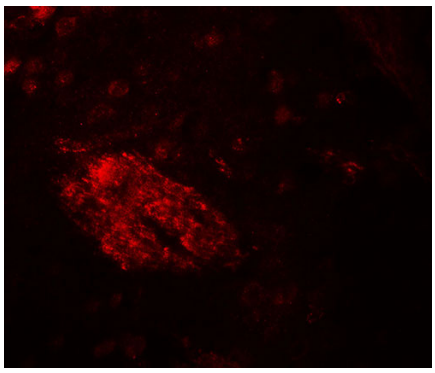
Images



Western blot analysis of WDR61 in SK-N-SH cell lysate with WDR61 antibody at 1 µg/ml.



Immunohistochemistry of WDR61 in mouse brain tissue with WDR61 antibody at 5 µg/ml.



Immunofluorescence of WDR61 in mouse brain tissue with WDR61 antibody at 20 µg/ml.

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