

## **WDR61 Antibody (N-Terminus)**

Rabbit Polyclonal Antibody Catalog # ALS16441

#### **Specification**

## WDR61 Antibody (N-Terminus) - Product Information

Application IHC, IF Primary Accession O9GZS3

Reactivity Human, Mouse, Rat

Host Rabbit
Clonality Polyclonal
Calculated MW 34kDa KDa

#### WDR61 Antibody (N-Terminus) - 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 antibody is human, mouse and rat reactive.

## **Reconstitution & Storage**

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

#### **Precautions**

WDR61 Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

## WDR61 Antibody (N-Terminus) - 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:<a href="http://www.uniprot.org/citations/16307923" target="\_blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="\_blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="\_blank">20178742</a>). 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:<a

href="http://www.uniprot.org/citations/16307923" target="\_blank">16307923</a>, PubMed:<a



href="http://www.uniprot.org/citations/19952111" target=" blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). PAF1C is required for transcription of Hox and Wnt target genes (PubMed:<a href="http://www.uniprot.org/citations/16307923" target=" blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). 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: <a  $href="http://www.uniprot.org/citations/16307923" \ target="\_blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="_blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/1995211" target="_blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="_blank">19952111</a>, PubMed:<a h$ href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3) (PubMed:<a href="http://www.uniprot.org/citations/16307923" target=" blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). 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:<a href="http://www.uniprot.org/citations/16307923" target=" blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors (PubMed:<a href="http://www.uniprot.org/citations/16307923" target="\_blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). In case of infection by influenza A strain H3N2, PAF1C associates with viral NS1 protein, thereby regulating gene transcription (PubMed: <a href="http://www.uniprot.org/citations/16307923" target=" blank">16307923</a>, PubMed:<a href="http://www.uniprot.org/citations/19952111" target="blank">19952111</a>, PubMed:<a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). Required for mono- and trimethylation on histone H3 'Lys-4' (H3K4me3), dimethylation on histone H3 'Lys-79' (H3K4me3). Required for Hox gene transcription (PubMed:<a href="http://www.uniprot.org/citations/16307923" target=" blank">16307923</a>, PubMed: <a href="http://www.uniprot.org/citations/19952111" target="blank">19952111</a>, PubMed: <a href="http://www.uniprot.org/citations/20178742" target="blank">20178742</a>). 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: <a  $href="http://www.uniprot.org/citations/16024656" target="\_blank">16024656</a>, PubMed:<a href="http://www.uniprot.org/citations/32006463" target="\_blank">32006463</a>, PubMed:<a href="http://www.uniprot.org/citations/32006463" target="_blank">32006463</a>, PubMed:$ href="http://www.uniprot.org/citations/35120588" target="blank">35120588</a>). 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: <a href="http://www.uniprot.org/citations/32006463" target=" blank">32006463</a>, PubMed:<a href="http://www.uniprot.org/citations/35120588" target="\_blank">35120588</a>). 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:<a href="http://www.uniprot.org/citations/32006463" target=" blank">32006463</a>).

Cellular Location Nucleus. Cytoplasm

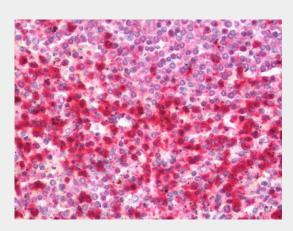
#### WDR61 Antibody (N-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

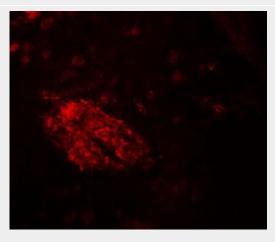


- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

## WDR61 Antibody (N-Terminus) - Images



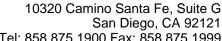
Human Spleen: Formalin-Fixed, Paraffin-Embedded (FFPE)



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

# WDR61 Antibody (N-Terminus) - Background

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 indepentently 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);





Tel: 858.875.1900 Fax: 858.875.1999

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. Required for mono- and trimethylation on histone H3 'Lys-4' (H3K4me3), dimethylation on histone H3 'Lys-79' (H3K4me3). Required for Hox gene transcription. 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.

## WDR61 Antibody (N-Terminus) - References

Shannon M., et al. Submitted (SEP-2000) to the EMBL/GenBank/DDBI databases. Tu Q.,et al.Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases. Ota T., et al. Nat. Genet. 36:40-45(2004). Ebert L., et al. Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases. Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.