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PRPF19 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP4870a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9UMS4
Other Accession	Q9JMJ4, Q99KP6, Q5ZMA2, Q08E38
Reactivity	Human, Mouse
Predicted	Bovine, Chicken, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20845
Calculated MW	55181
Antigen Region	4-33

Additional Information

Gene ID	27339
Other Names	Pre-mRNA-processing factor 19, 632-, Nuclear matrix protein 200, PRP19/PSO4 homolog, hPso4, Senescence evasion factor, PRPF19 (HGNC:17896)
Target/Specificity	This PRPF19 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 4-33 amino acids from the N-terminal region of human PRPF19.
Dilution	WB~~1:1000 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	PRPF19 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRPF19 (HGNC:17896)

Function	Ubiquitin-protein ligase which is a core component of several complexes mainly involved pre-mRNA splicing and DNA repair. Required for pre-mRNA splicing as component of the spliceosome (PubMed:28076346, PubMed:28502770, PubMed:29301961, PubMed:29360106, PubMed:30705154). Core component of the PRP19C/Prp19 complex/NTC/Nineteen complex which is part of the spliceosome and participates in its assembly, its remodeling and is required for its activity. During assembly of the spliceosome, mediates 'Lys-63'-linked polyubiquitination of the U4 spliceosomal protein PRPF3. Ubiquitination of PRPF3 allows its recognition by the U5 component PRPF8 and stabilizes the U4/U5/U6 tri- snRNP spliceosomal complex (PubMed:20595234). Recruited to RNA polymerase II C-terminal domain (CTD) and the pre-mRNA, it may also couple the transcriptional and spliceosomal machineries (PubMed:21536736). The XAB2 complex, which contains PRPF19, is also involved in pre-mRNA splicing, transcription and transcription-coupled repair (PubMed:17981804). Beside its role in pre-mRNA splicing PRPF19, as part of the PRP19-CDC5L complex, plays a role in the DNA damage response/DDR. It is recruited to the sites of DNA damage by the RPA complex where PRPF19 directly ubiquitinates RPA1 and RPA2. 'Lys-63'- linked polyubiquitination of the RPA complex allows the recruitment of the ATR-ATRIP complex and the activation of ATR, a master regulator of the DNA damage response (PubMed:24332808). May also play a role in DNA double-strand break (DSB) repair by recruiting the repair factor SETMAR to altered DNA (PubMed:18263876). As part of the PSO4 complex may also be involved in the DNA interstrand cross-links/ICLs repair process (PubMed:16223718). In addition, may also mediate 'Lys-48'-linked polyubiquitination of substrates and play a role in proteasomal degradation (PubMed:11435423). May play a role in the biogenesis of lipid droplets (By similarity). May play a role in neural differentiation possibly through its function as part of the spliceosome (By similarity).
Cellular Location	Nucleus. Nucleus, nucleoplasm. Cytoplasm, cytoskeleton, spindle. Cytoplasm. Lipid droplet {ECO:0000250|UniProtKB:Q99KP6}. Note=Nucleoplasmic in interphase cells Irregularly distributed in anaphase cells. In prophase cells, uniformly distributed, but not associated with condensing chromosomes. Found in extrachromosomal regions in metaphase cells. Mainly localized to the mitotic spindle apparatus when chromosomes segregate during anaphase When nuclei reform during late telophase, uniformly distributed in daughter cells and displays no preferred association with decondensing chromatin. Recruited on damaged DNA at sites of double-strand break
Tissue Location	Ubiquitous. Weakly expressed in senescent cells of different tissue origins. Highly expressed in tumor cell lines

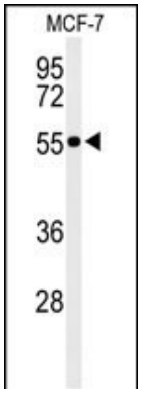
Background

PRPF19 is the human homolog of yeast Pso4, a gene essential for cell survival and DNA repair.

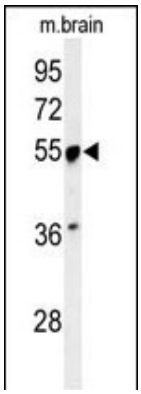
References

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Fortschegger, K., et al. Mol. Cell. Biol. 27(8):3123-3130(2007)
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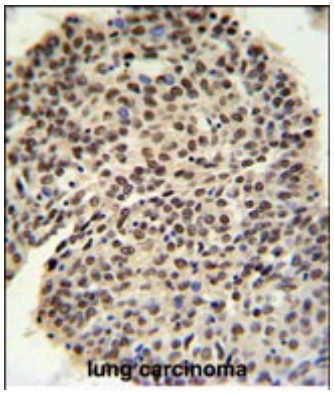
Images



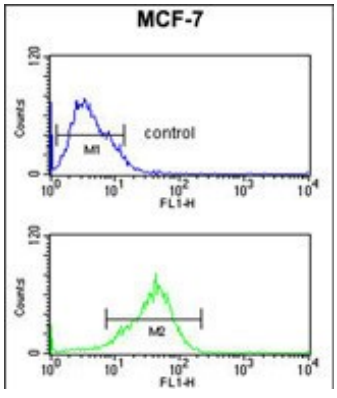
Western blot analysis of PRPF19 Antibody (N-term) (Cat. #AP4870a) in MCF-7 cell line lysates (35ug/lane). PRPF19 (arrow) was detected using the purified Pab.



Western blot analysis of PRPF19 Antibody (N-term) (Cat. #AP4870a) in mouse brain tissue lysates (35ug/lane). PRPF19 (arrow) was detected using the purified Pab.



PRPF19 Antibody (N-term) (Cat. #AP4870a) IHC analysis in formalin fixed and paraffin embedded lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PRPF19 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



PRPF19 Antibody (N-term) (Cat. #AP4870a) flow cytometric analysis of MCF-7 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- PRPF19 promotes tongue cancer growth and chemoradiotherapy resistance

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