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PRPF19 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51451

Specification

PRPF19 Antibody - Product Information

Application	**WB**
Primary Accession	Q9UMS4
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**55 KDa**
Antigen Region	**151 - 210**

PRPF19 Antibody - 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
KLH conjugated synthetic peptide derived from human PRPF19

Dilution
WB~~ 1:1000

Format
0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage
Store at -20 °C.Stable for 12 months from date of receipt

PRPF19 Antibody - 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:<a href="http://www.uniprot.org/citations/30705154"

target="_blank">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

PRPF19 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PRPF19 Antibody - Images

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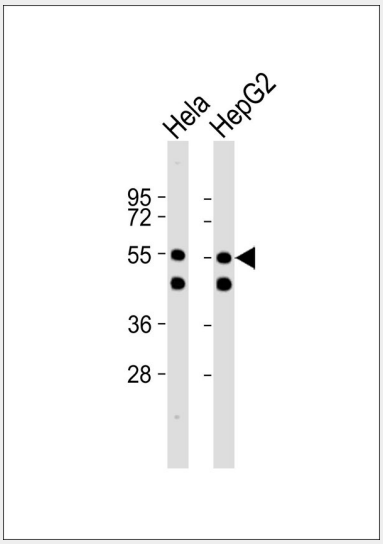

All lanes : Anti-PRPF19 Antibody at 1:1000 dilution Lane 1: Hela whole cell lysates Lane 2: HepG2 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

PRPF19 Antibody - Background

Plays a role in DNA double-strand break (DSB) repair. Binds double-stranded DNA in a sequence-nonspecific manner. Acts as a structural component of the nuclear framework. May also serve as a support for spliceosome binding and activity. Essential for spliceosome assembly in a oligomerization-dependent manner and might also be important for spliceosome stability. May have E3 ubiquitin ligase activity. The PSO4 complex is required in the DNA interstrand cross-links (ICLs) repair process. Component of the PRP19-CDC5L complex that forms an integral part of the spliceosome and is required for activating pre-mRNA splicing.

PRPF19 Antibody - References

Gotzmann J.,et al.Exp. Cell Res. 261:166-179(2000).
Mahajan K.N.,et al.Proc. Natl. Acad. Sci. U.S.A. 100:10746-10751(2003).
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Bienvenut W.V.,et al.Submitted (JAN-2010) to UniProtKB.
Gerner C.,et al.J. Cell. Biochem. 74:145-151(1999).