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### Antibodies to RNA processing proteins

#### Phospho (Ser265)-Pre mRNA Processing Factor 19 (Prpf19) antibodies (Cat # PPrpf19-140AP, P-PPrpf19 and PC-PPrpf19)

*Alternate nomenclature:* Prp19; PSO4; MGC124562; Prpf19

The human nuclear matrix proteins (hNMP) have reassembling and potential filament forming capabilities. The hNMP200 has a 56kDa nuclear protein that is also found in metazoans, plants, yeast. This subunit is homologous to saccharomyces cerevisiae protein prp19 which play an essential role in pre-mRNA processing. The human homolog of prp19 is involved in double DNA strand break repair. A number of proteins involved in adapter or regulatory modules in signal transduction, pre mRNA processing and cytoskeletal assembly typically contains a GH dipeptide 11-24 residues from its N-terminus and WD dipeptide at its C-terminus and is 40 amino acids long hence is called WD40 motif. A number of eukaryotic proteins contain WD40 domain that perform variety of functions including signal transduction, pre mRNA processing and cytoskeletal assembly. The WD40 domains typically contain GH dipeptide 11-24 residues from its N-terminus and the WD dipeptide at its C-terminus and is generally 40 amino acids long, between GH and WD lies a conserved core that serves as a propeller like platform to which protein can bind stably or reversibly. The core has propeller like structures with several blades where each blade is composed of 4 stranded anti-parallel beta sheet. The residues on the top and bottom surface of the propeller are proposed to coordinate interactions with other proteins and /or small ligands. This protein motif is found in Prp19-like proteins, the regions represented by this family cover the sequences implicated in self-interaction and a coiled-coiled motif. Prp19-like proteins form an oligomer that is necessary for spliceosome assembly.

The formation of DNA interstrand cross-links (ICLs) are the most formidable lesion encountered by the cellular DNA repair machinery, and the elucidation of the process by which they are removed in eukaryotic cells was a daunting task for cell machinery to overcome. In particular, the early stages of adduct recognition and uncoupling of the cross-link have remained elusive. The ICL repair activity is contributed partly by mismatch repair factor MutSbeta, the nucleotide excision repair heterodimer Ercc1-Xpf and the replication protein RPA and PCNA are involved in the early stages of ICL repair mechanism. Two additional factors previously characterized are pre-mRNA splicing complex composed of PSO4/Prp19f, Cdc5L, Prlg1, and Spf27, also known as PSO4 complex and WRN, the protein deficient in Werners syndrome. Prp19f is located on chromosome 1 at location 1q43. The Prp19 is a 400 amino acids protein in rat and the human homolog is 504 aa long due to extended N-terminal of the protein. A 346 amino acid core protein is homologous in both rat and human Prp19f. The Prp19f undergoes phosphorylation at serine-265 (serine 373 human), the kinase and implication of this phosphorylation is not yet fully understood.

The Phospho(Ser265)-Prp19f-selective antibody was generated using a peptide from the putative phosphorylation site surrounding Ser-265 in mouse (Ser-373 in human), the 15mer peptide containing phospho-Ser was used to immunize rabbits. The Phospho-Prp19f antibodies are affinity purified over immobilized antigen based chromatography, and purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc., will also provide limited quantities of both phospho and non-phospho- antigenic blocking peptide and western blot positive control for Prp19f, please inquire availability before ordering. A pan-antibody for Prp19f is also available, please inquire catalog # Prpf19-101AP. FabGennix International Inc. carries a number of antibodies to epigenetic targets including RNA binding proteins, for a complete listing visit [www.FabGennix.com](http://www.FabGennix.com). FabGennix Inc. will also conjugate antibodies with fluorescent probes upon request at a reasonable cost.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	volume
PPrpf19f-140AP	Rabbit	Affinity purified Phospho-Prp19f antibodies	H, M	100 ug	175-200ul
P-PPrpf19f	Rabbit	Antigenic blocking peptide for PPrpf19f-140AP	n/a	100 ug	100ul
PC-PPrpf19f	Rabbit	Western blot positive control for Phospho-Prp19f	n/a	inquire	for 5 appl

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; \* not all variants are labeled equally

**Immunogen:** Synthetic peptides corresponding to rat Prp19f positions 263-276 amino acid sequence (tgt mds(p) qik iwd lk). This sequence is conserved in several other variants of Prp19f form different species including rat, mouse human and cat. The peptide was post-synthetically modified for proper coupling to carrier protein and to obtain desired antigenicity.

**Concentration:** PPrpf19f-140AP: IgG concentration 0.55-58mg/ml in antibody stabilization buffer.

**Applications:** Antibody PPrpf19f-140AP is ideal for WB application; other applications have not been tested. The species cross reactivity for this antibody is done on rat and human samples, other species cross reactivity is not established. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:400; IMM & i.p pull-down assays: n.d; IHC n.d. Investigators can request for a sample of this antibody if their use involves application in protocols other than listed here.

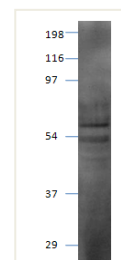
**Reactivity:** This antibody detects 2 bands between 64 and 67kDa range in Western blot positive control (Cat # PC-PPrpf19f) samples. The antibody does not cross react with other proteins in the sample tested.

**Protocols:** Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

**Form/Storage:** The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20°C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45 filter after every use for long-term storage.

**Notes:**

Now you can recycle your western blots (nitrocellulose, supported membranes and PVDF membranes) by using our StripOBuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating is required.



Western Blot of Prp19f-101AP with PC-Prp19. Antibody dilution (1:500) in diluOBuffer. MWM are indicated on left. MW of Prp19f is 60 kDa

For users who may require large amounts of PPrpf19f-140AP, please enquire about bulk material discounts. This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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