

**PARP3 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP20360a**

**Specification**

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**PARP3 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q9Y6F1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	60089
Antigen Region	99-126

**PARP3 Antibody (N-term) - Additional Information**

**Gene ID** 10039

**Other Names**

Poly [ADP-ribose] polymerase 3, PARP-3, hPARP-3, ADP-ribosyltransferase diphtheria toxin-like 3, ARTD3, IRT1, NAD(+) ADP-ribosyltransferase 3, ADPRT-3, Poly[ADP-ribose] synthase 3, pADPRT-3, PARP3, ADPRT3, ADPRTL3

**Target/Specificity**

This PARP3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 99-126 amino acids from the N-terminal region of human PARP3.

**Dilution**

WB~~1:1000

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**

PARP3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**PARP3 Antibody (N-term) - Protein Information**

**Name** PARP3 {ECO:0000303|PubMed:10329013, ECO:0000312|HGNC:HGNC:273}

**Function** Mono-ADP-ribosyltransferase that mediates mono-ADP- ribosylation of target proteins and plays a key role in the response to DNA damage (PubMed:[16924674](#), PubMed:[19354255](#), PubMed:[20064938](#), PubMed:[21211721](#), PubMed:[21270334](#), PubMed:[23742272](#), PubMed:[24598253](#), PubMed:[25043379](#), PubMed:[28447610](#)). Mediates mono-ADP-ribosylation of glutamate, aspartate or lysine residues on target proteins (PubMed:[20064938](#), PubMed:[25043379](#)). In contrast to PARP1 and PARP2, it is not able to mediate poly-ADP-ribosylation (PubMed:[25043379](#)). Involved in DNA repair by mediating mono-ADP-ribosylation of a limited number of acceptor proteins involved in chromatin architecture and in DNA metabolism, such as histone H2B, XRCC5 and XRCC6 (PubMed:[16924674](#), PubMed:[24598253](#)). ADP-ribosylation follows DNA damage and appears as an obligatory step in a detection/signaling pathway leading to the reparation of DNA strand breaks (PubMed:[16924674](#), PubMed:[21211721](#), PubMed:[21270334](#)). Involved in single-strand break repair by catalyzing mono-ADP-ribosylation of histone H2B on 'Glu-2' (H2BE2ADPr) of nucleosomes containing nicked DNA (PubMed:[27530147](#)). Cooperates with the XRCC5-XRCC6 (Ku80-Ku70) heterodimer to limit end-resection thereby promoting accurate NHEJ (PubMed:[24598253](#)). Suppresses G-quadruplex (G4) structures in response to DNA damage (PubMed:[28447610](#)). Associates with a number of DNA repair factors and is involved in the response to exogenous and endogenous DNA strand breaks (PubMed:[16924674](#), PubMed:[21211721](#), PubMed:[21270334](#)). Together with APLF, promotes the retention of the LIG4-XRCC4 complex on chromatin and accelerate DNA ligation during non-homologous end-joining (NHEJ) (PubMed:[21211721](#)). May link the DNA damage surveillance network to the mitotic fidelity checkpoint (PubMed:[16924674](#)). Acts as a negative regulator of immunoglobulin class switch recombination, probably by controlling the level of AICDA /AID on the chromatin (By similarity). In addition to proteins, also able to ADP-ribosylate DNA: mediates DNA mono-ADP- ribosylation of DNA strand break termini via covalent addition of a single ADP-ribose moiety to a 5'- or 3'-terminal phosphate residues in DNA containing multiple strand breaks (PubMed:[29361132](#), PubMed:[29520010](#)).

#### **Cellular Location**

Nucleus. Chromosome. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Note=Almost exclusively localized in the nucleus and appears in numerous small foci and a small number of larger foci whereas a centrosomal location has not been detected (PubMed:[16924674](#)). In response to DNA damage, localizes to sites of double-strand break (PubMed:[21270334](#), PubMed:[28447610](#)). Also localizes to single-strand breaks (PubMed:[27530147](#)). Preferentially localized to the daughter centriole (PubMed:[10329013](#)).

#### **Tissue Location**

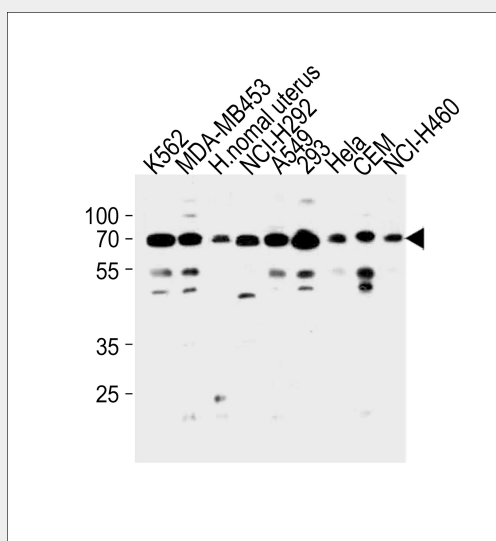
Widely expressed; the highest levels are in the kidney, skeletal muscle, liver, heart and spleen; also detected in pancreas, lung, placenta, brain, leukocytes, colon, small intestine, ovary, testis, prostate and thymus.

#### **PARP3 Antibody (N-term) - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **PARP3 Antibody (N-term) - Images**



PARP3 Antibody (N-term) (Cat. #AP20360a) western blot analysis in K562,MDA-MB453,NCI-H292,A549,293,HeLa,CEM,NCI-H460 cell line and human normal uterus tissue lysates (35ug/lane).This demonstrates the PARP3 antibody detected the PARP3 protein (arrow).

#### **PARP3 Antibody (N-term) - Background**

Involved in the base excision repair (BER) pathway, by catalyzing the poly(ADP-ribosyl)ation of a limited number of acceptor proteins involved in chromatin architecture and in DNA metabolism. This modification follows DNA damages and appears as an obligatory step in a detection/signaling pathway leading to the reparation of DNA strand breaks. May link the DNA damage surveillance network to the mitotic fidelity checkpoint. Negatively influences the G1/S cell cycle progression without interfering with centrosome duplication. Binds DNA. May be involved in the regulation of PRC2 and PRC3 complex-dependent gene silencing.