10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PARP3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20360a

Product Information

Application	WB, E
Primary Accession	Q9Y6F1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	60089
Antigen Region	99-126

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.

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

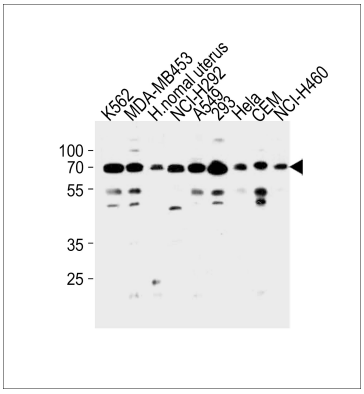
Widely expressed; the highest levels are in the kidney, skeletal muscle, liver, heart and spleen; also detected in pancreas, lung, placenta, brain, leukocytes, colon, small intestine, ovary, testis, prostate and thymus.

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.

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 nomal uterus tissue lysates (35ug/lane).This demonstrates the PARP3 antibody detected the PARP3 protein (arrow).