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PARP3 Antibody (internal region)

Peptide-affinity purified goat antibody

Catalog # AF2872a

Specification

PARP3 Antibody (internal region) - Product Information

Application	**E**
Primary Accession	Q9Y6F1
Other Accession	NP_001003931.2, NP_001003935.2, 10039
Predicted	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**60089**

PARP3 Antibody (internal region) - Additional Information

Gene ID 10039

Other Names
Poly [ADP-ribose] polymerase 3, PARP-3, hPARP-3, 2.4.2.30, ADP-ribosyltransferase diphtheria toxin-like 3, ARTD3, IRT1, NAD(+) ADP-ribosyltransferase 3, ADPRT-3, Poly[ADP-ribose] synthase 3, pADPRT-3, PARP3, ADPRT3, ADPRTL3

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PARP3 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

PARP3 Antibody (internal region) - 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:<a

href="http://www.uniprot.org/citations/21270334" target="_blank">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.

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PARP3 Antibody (internal region) - 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

PARP3 Antibody (internal region) - Images

PARP3 Antibody (internal region) - Background

This antibody is expected to recognize both reported isoforms (NP_001003931.2; NP_001003935.2).

PARP3 Antibody (internal region) - References

PARP-3 associates with polycomb group bodies and with components of the DNA damage repair machinery. Rouleau M, McDonald D, Gagné P, Ouellet ME, Droit A, Hunter JM, Dutertre S, Prigent C, Hendzel MJ, Poirier GG. J Cell Biochem. 2007 Feb 1;100(2):385-401. PMID: 16924674