

Rabbit PARP1 Polyclonal Antibody | anti-PARP1 antibody

PARP1 Antibody

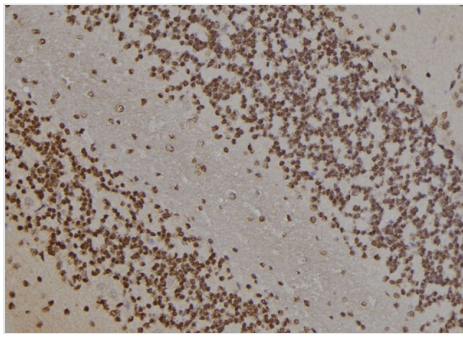
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326921	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

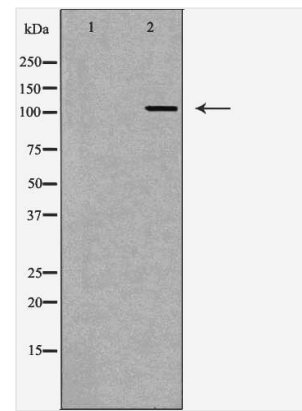
PARP1; Polyclonal Antibody; PARP1 Antibody; ADP-ribosyltransferase diphtheria toxin-like 1; ADPRT 1; ADPRT; ADPRT1; APOPAIN; ARTD1; NAD(+) ADP-ribosyltransferase 1; PARP; PARP-1; PARP1_HUMAN; Poly [ADP-ribose] polymerase 1; Poly ADP ribose polymerase 1; Poly[ADP-ribose] synthase 1; PPOL; SCA1; anti-PARP1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PARP1 antibody detects endogenous levels of total PARP1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1014
Applicable Applications for anti-PARP1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PARP1
Subcellular Location	Nucleus.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

**IHC (Immunohistochemistry)**

AAA326921 at 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

**WB (Western Blot)**

Western blot analysis of Hela whole cell lysates, using PARP1 Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PARP1 antibody

Description: PARP, a 116 kDa nuclear poly (ADP-ribose) polymerase, appears to be involved in DNA repair in response to environmental stress (1). This protein can be cleaved by many ICE-like caspases in vitro (2, 3) and is one of the main cleavage targets of caspase-3 in vivo (4, 5). In human PARP, the cleavage occurs between Asp214 and Gly215, which separates the PARP amino-terminal DNA binding domain (24 kDa) from the carboxy-terminal catalytic domain (89 kDa) (2, 4). PARP helps cells to maintain their viability; cleavage of PARP facilitates cellular disassembly and serves as a marker of cells undergoing apoptosis (6).

Function: 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 (PubMed:17177976, PubMed:18172500, PubMed:19344625, PubMed:19661379, PubMed:23230272). Mediates the poly(ADP-ribosyl)ation of APLF and CHFR (PubMed:17396150). Positively regulates the transcription of MTUS1 and negatively regulates the transcription of MTUS2/TIP150. With EEF1A1 and TXK, forms a complex that acts as a T-helper 1 (Th1) cell-specific transcription factor and binds the promoter of IFN-gamma to directly regulate its transcription, and is thus involved importantly in Th1 cytokine production (PubMed:17177976). Required for PARP9 and DTX3L recruitment to DNA damage sites (PubMed:23230272). PARP1-dependent PARP9-DTX3L-mediated ubiquitination promotes the rapid and specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites (PubMed:23230272). Mediates serine ADP-ribosylation of target proteins following interaction with HPF1; HPF1 conferring serine specificity (PubMed:28190768). Mediates the poly(ADP-ribosyl)ation of histones in a HPF1-dependent manner (PubMed:27067600). Involved in the synthesis of ATP in the nucleus, together with NMNAT1, PARG and NUDT5 (PubMed:27257257). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:27257257).

Subunit Structure: Component of a base excision repair (BER) complex, containing at least XRCC1, PARP2, POLB and LIG3. Homo- and heterodimer with PARP2. Interacts with APTX (PubMed:15044383). Interacts with PARP3. Interacts with SRY (PubMed:16904257). The SWAP complex consists of NPM1, NCL, PARP1 and SWAP70. Interacts with TIAM2 (By similarity). Interacts (when poly-ADP-ribosylated) with CHD1L (PubMed:19661379). Interacts with the DNA polymerase alpha catalytic subunit POLA1; this interaction functions as part of the control of replication fork progression (PubMed:9518481). Interacts with EEF1A1 and TXK (PubMed:17177976). Interacts with RNF4 (PubMed:19779455). Interacts with RNF146 (PubMed:21799911). Interacts with ZNF423 (PubMed:22863007). Interacts with SNAI1 (via zinc fingers); the interaction requires SNAI1 to be poly-ADP-ribosylated and non-phosphorylated (active) by GSK3B (PubMed:21577210). Interacts (when poly-ADP-ribosylated) with PARP9 (PubMed:23230272). Interacts with NR4A3; activates PARP1 by improving acetylation of PARP1 and suppressing the interaction between PARP1 and SIRT1 (By similarity). Interacts (via catalytic domain) with PUM3; the interaction inhibits the poly(ADP-ribosyl)ation activity of PARP1 and the degradation of PARP1 by CASP3 following genotoxic stress (PubMed:21266351). Interacts (via the PARP catalytic domain) with HPF1 (PubMed:27067600, PubMed:28190768). Interacts with ZNF365 (PubMed:23966166). Interacts with RRP1B (PubMed:19710015).

Post-translational Modifications: Phosphorylated by PRKDC and TXK. Poly-ADP-ribosylated by PARP2; poly-ADP-ribosylation mediates the recruitment of CHD1L to DNA damage sites (PubMed:19661379). ADP-ribosylated on serine by autocatalysis; serine ADP-ribosylation takes place following interaction with HPF1 (PubMed:28190768). S-nitrosylated, leading to inhibit transcription regulation activity.

References	Liu Y, Geng L, Zhang J, Wang J, Zhang Q, Duan D, Zhang Q; Journal: Mar Drugs. Oligo-Porphyrin Ameliorates Neurobehavioral Deficits in Parkinsonian Mice by Regulating the PI3K/Akt/Bcl-2 Pathway.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	156523968
NCBI GeneID	142
NCBI Accession #	NP_001609.2
NCBI GenBank Nucleotide #	NM_001618.3
UniProt Accession #	P09874; Q8IUZ9; B1ANJ4
Molecular Weight	Observed: 113 kDa Predicted: 114 kDa
NCBI Official Full Name	poly
NCBI Official Synonym Full Names	poly(ADP-ribose) polymerase 1
NCBI Official Symbol	PARP1
NCBI Official Synonym Symbols	PARP; PPOL; ADPRT; ARTD1; ADPRT1; PARP-1; ADPRT 1; pADPRT-1
NCBI Protein Information	poly [ADP-ribose] polymerase 1
UniProt Protein Name	Poly [ADP-ribose] polymerase 1
UniProt Gene Name	PARP1
UniProt Synonym Gene Names	ADPRT; PPOL; PARP-1; ARTD1; ADPRT 1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/parp1-antibody-immunohistochemistry-western-blot-elisa/326921>