

Rabbit Phospho-PARP1 (S782) Polyclonal Antibody | anti-PARP1 antibody

Phospho-PARP1 (S782) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA288409	Rabbit	Human (Predicted Reactivity: Bovine, Hamster, Mouse, Rat)	ELISA, Dot Blot

PRODUCT SYNONYMS

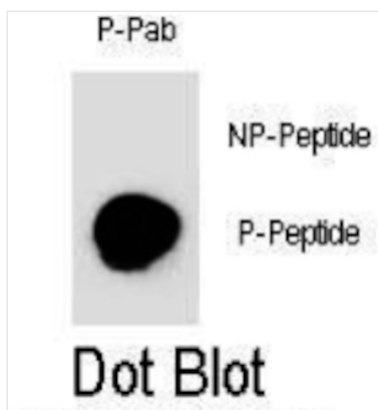
Phospho-PARP1 (S782); Polyclonal Antibody; Phospho-PARP1 (S782) Antibody; Poly [ADP-ribose] polymerase 1; PARP-1; ADP-ribosyltransferase diphtheria toxin-like 1; ARTD1; NAD(+) ADP-ribosyltransferase 1; ADPRT 1; Poly[ADP-ribose] synthase 1; PARP1; ADPRT; PPOL; anti-PARP1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human (Predicted Reactivity: Bovine, Hamster, Mouse, Rat)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	This PARP1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S782 of human PARP1.
Purity/Purification	This antibody is purified through a protein A column, followed by peptide affinity purification.
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Sequence Length	1,014
Applicable Applications for anti-PARP1 antibody	ELISA, DB (Dot Blot)
Cellular Location	Chromosome. Nucleus. Nucleus, nucleolus. Cytoplasm, cytosol. Note=Localizes to sites of DNA damage (PubMed:23230272, PubMed:26344098, PubMed:27568560, PubMed:30675909, PubMed:34625544, PubMed:34795260, PubMed:32358582, PubMed:22683995, PubMed:32241924). Recognizes (via PARP-type zinc-fingers) and binds DNA strand breaks (PubMed:22683995). Also binds normal/undamaged chromatin (PubMed:15607977). Auto poly-ADP-ribosylation promotes dissociation from chromatin (PubMed:15607977, PubMed:30675909, PubMed:32358582, PubMed:34625544). Extracted from chromatin by VCP/p97 following sumoylation and ubiquitination (PubMed:35013556). Translocates from the nucleus to the cytosol following phosphorylation by PRKDC (PubMed:35460603). Recruited to replication forks following interaction with CARM1 (PubMed:33412112). [Poly [ADP-ribose] polymerase 1, processed C- terminus]: Cytoplasm. Note=Following cleavage by caspase-3 (CASP3) and caspase-7 (CASP7) in response to apoptosis, translocates into the cytoplasm, where the auto-poly-ADP- ribosylated form serves as a poly-ADP-ribose carrier to induce AIFM1- mediated apoptosis.

Function	Poly-ADP-ribosyltransferase that mediates poly-ADP- ribosylation of proteins and plays a key role in DNA repair (PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed:). Mainly mediates glutamate and aspartate ADPriboseylation of target proteins: the ADP-D-ribosyl group of NAD(+) is transferred to the acceptor carboxyl group of glutamate and aspartate residues and further ADP-ribosyl groups are transferred to the 2'-position of the terminal adenosine moiety, building up a polymer with an average chain length of 20-30 units (PubMed: , PubMed: , PubMed: , PubMed:). Mediates the poly(ADP-ribosyl)ation of a number of proteins, including itself, APLF and CHFR (PubMed: , PubMed:). Also mediates serine ADP-ribosylation of target proteins following interaction with HPF1; HPF1 conferring serine specificity (PubMed:). Probably also catalyzes tyrosine ADP-ribosylation of target proteins following interaction with HPF1 (PubMed:). Catalyzes the poly-ADP-ribosylation of histones in a HPF1-dependent manner (PubMed:). Involved in the base excision repair (BER) pathway by catalyzing the poly-ADP-ribosylation of a limited number of acceptor proteins involved in chromatin architecture and in DNA metabolism (PubMed: , PubMed: , PubMed: , PubMed: , PubMed:). 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: , PubMed: , PubMed: , PubMed: , PubMed:). In addition to base excision repair (BER) pathway, also involved in double-strand breaks (DSBs) repair: together with TIMELESS, accumulates at DNA damage sites and promotes homologous recombination repair by mediating poly-ADP- ribosylation (PubMed: , PubMed:). In addition to proteins, also able to ADP-ribosylate DNA: catalyzes ADPriboseylation of DNA strand break termini containing terminal phosphates and a 2'-OH group in single- and double-stranded DNA, respectively (PubMed:). Required for PARP9 and DTX3L recruitment to DNA damage sites (PubMed:). PARP1-dependent PARP9-DTX3L-mediated ubiquitination promotes the rapid and specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites (PubMed:). Acts as a regulator of transcription: positively regulates the transcription of MTUS1 and negatively regulates the transcription of MTUS2/TIP150 (PubMed:). 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:). Involved in the synthesis of ATP in the nucleus, togetherwith NMNAT1, PARG and NUDT5 (PubMed:). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:).
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES



DB (Dot Blot)

Dot blot analysis of Phospho-PARP1-S782 Antibody Phospho-specific Pab (AAA288409) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

ADDITIONAL INFORMATION

Related Product Information for anti-PARP1 antibody	Description: This gene encodes a chromatin-associated enzyme, poly(ADP-ribosyl)transferase, which modifies various nuclear proteins by poly(ADP-ribosyl)ation. The modification is dependent on DNA and is involved in the regulation of various important cellular processes such as differentiation, proliferation, and tumor transformation and also in the regulation of the molecular events involved in the recovery of cell from DNA damage. In addition, this enzyme may be the site of mutation in Fanconi anemia, and may participate in the pathophysiology of type I diabetes.
Product Categories/Family for anti-PARP1 antibody	Cell Biology; Metabolism; Phospho Antibodies

References	Majewski, P.M., et al. J. Biol. Chem. 285(45):34828-34838(2010) Kim, M., et al. Cancer Sci. 101(11):2436-2442(2010) Dong, Y., et al. Cancer Res. 70(20):8088-8096(2010) Krishnakumar, R., et al. Mol. Cell 39(5):736-749(2010) Lee, K.A., et al. Rheumatol. Int. (2010) In press :
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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	113084
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
UniProt Entry Name	PARP1_HUMAN

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/phospho-parp1-s782-antibody-dot-blot-elisa/288409>