

Rabbit anti-Human Phospho-PARP1 (T373) Polyclonal Antibody | anti-PARP1 antibody

Phospho-PARP1 (T373) Antibody

CATALOG # AAA284214	HOST Rabbit	REACTIVITY Human	APPLICATIONS ELISA, Dot Blot
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PRODUCT SYNONYMS

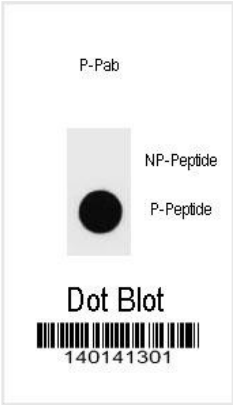
Phospho-PARP1 (T373); Polyclonal Antibody; Phospho-PARP1 (T373) Antibody; Poly [ADP-ribose] polymerase 1; PARP-1; ADP-ribosyltransferase diphtheria toxin-like 1; ARTD1; NAD(+) ADP-ribosyltransferase 1; ADPRT 1; Poly[ADP-ribose] synthase 1; PARP1; ADPRT; PPOL; anti-PARP1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	IgG
Specificity	This PARP1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T373 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	1014
Applicable Applications for anti-PARP1 antibody	ELISA, DB (Dot Blot)
Cellular Location	Nucleus. Nucleus, nucleolus. Chromosome. Note=Localizes to sites of DNA damage

Function	Poly-ADP-ribosyltransferase that mediates poly-ADP- ribosylation of proteins and plays a key role in DNA repair (PubMed:17177976, PubMed:18172500, PubMed:19344625, PubMed:19661379, PubMed:21680843, PubMed:23230272, PubMed:25043379, PubMed:33186521, PubMed:32028527, PubMed:26344098). Mediates glutamate, aspartate, serine or tyrosine ADP-ribosylation of proteins: the ADP-D-ribosyl group of NAD(+) is transferred to the acceptor carboxyl group of target 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:7852410, PubMed:9315851, PubMed:19764761, PubMed:25043379, PubMed:28190768, PubMed:29954836). Serine ADP-ribosylation of proteins constitutes the primary form of ADP-ribosylation of proteins in response to DNA damage (PubMed:33186521). Mainly mediates glutamate and aspartate ADP- ribosylation of target proteins in absence of HPF1 (PubMed:19764761, PubMed:25043379). Following interaction with HPF1, catalyzes serine ADP-ribosylation of target proteins; HPF1 conferring serine specificity by completing the PARP1 active site (PubMed:28190768, PubMed:29954836, PubMed:33186521, PubMed:32028527). Also catalyzes tyrosine ADP- ribosylation of target proteins following interaction with HPF1 (PubMed:30257210, PubMed:29954836). PARP1 initiates the repair of DNA breaks: recognizes and binds DNA breaks within chromatin and recruits HPF1, licensing serine ADP-ribosylation of target proteins, such as histones, thereby promoting decompaction of chromatin and the recruitment of repair factors leading to the reparation of DNA strand breaks (PubMed:17177976, PubMed:18172500, PubMed:19344625, PubMed:19661379, PubMed:23230272, PubMed:27067600). 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:26344098, PubMed:30356214). Mediates the poly(ADP- ribosyl)ation of a number of proteins, including itself, APLF and CHFR (PubMed:17396150, PubMed:19764761). In addition to proteins, also able to ADP-ribosylate DNA: catalyzes ADP-ribosylation of DNA strand break termini containing terminal phosphates and a 2'-OH group in single- and double-stranded DNA, respectively (PubMed:27471034). 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). Acts as a regulator of transcription: positively regulates the transcription of MTUS1 and negatively regulates the transcription of MTUS2/TIP150 (PubMed:19344625). Plays a role in the positive regulation of IFNG transcription in T-helper 1 cells as part of an IFNG promoter-binding complex with TXK and EEF1A1 (PubMed:17177976). 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).
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-T373 Antibody Phospho-specific Pab 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	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.
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Product Categories/Family for anti-PARP1 antibody	Cell Biology; Metabolism; Signal Transduction; 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 :

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://www.aaabiotech.com/polyclonal/phospho-parp1-t373-antibody-dot-blot-elisa/284214>