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Cleaved PARP Monoclonal Antibody(Mix)

Catalog # AP63377

Specification

Cleaved PARP Monoclonal Antibody(Mix) - Product Information

Application	IF
Primary Accession	P09874
Reactivity	Human
Host	Mouse
Clonality	Monoclonal

Cleaved PARP Monoclonal Antibody(Mix) - Additional Information

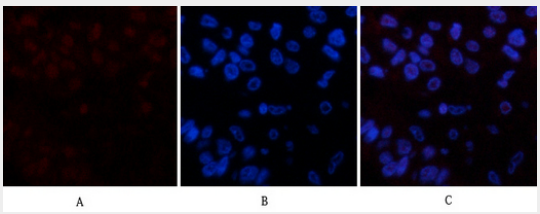
Gene ID 142

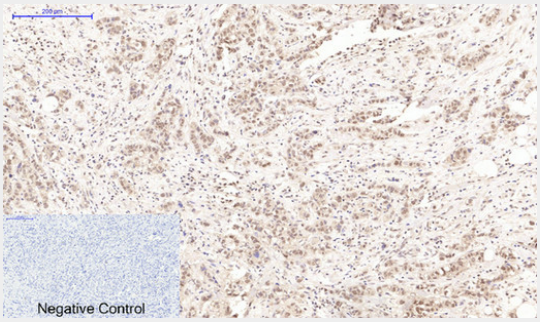
Other Names
PARP1; ADPRT; PPOL; Poly [ADP-ribose] polymerase 1; PARP-1; ADP-ribosyltransferase diphtheria toxin-like 1; ARTD1; NAD(+) ADP-ribosyltransferase 1; ADPRT 1; Poly[ADP-ribose] synthase 1

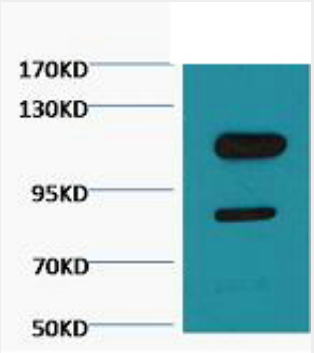
Dilution
IF~~IF: 1:50-200 WB: 1:2000-5000 IHC 1:50-300

Format
PBS, pH 7.4, containing 0.02% sodium azide as Preservative and 50% Glycerol.

Storage Conditions
-20℃







Cleaved PARP Monoclonal Antibody(Mix) - Protein Information

Name PARP1 (HGNC:270)

Function
Poly-ADP-ribosyltransferase that mediates poly-ADP- ribosylation of proteins and plays a key role in DNA repair (PubMed:17177976, PubMed:18172500, PubMed:<a href="http://www.uniprot.org/ci

Cleaved PARP Monoclonal Antibody(Mix) - Background

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:23230272, PubMed:25043379, PubMed:26344098). Mainly mediates glutamate and aspartate ADP-ribosylation of target proteins: the ADP-D-ribosyl group of NAD(+) is transferred to

tations/19344625"
target="_blank">19344625,
PubMed:<a href="http://www.uniprot.org/ci
tations/19661379"
target="_blank">19661379,
PubMed:<a href="http://www.uniprot.org/ci
tations/23230272"
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PubMed:<a href="http://www.uniprot.org/ci
tations/25043379"
target="_blank">25043379,
PubMed:<a href="http://www.uniprot.org/ci
tations/33186521"
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PubMed:<a href="http://www.uniprot.org/ci
tations/32028527"
target="_blank">32028527,
PubMed:<a href="http://www.uniprot.org/ci
tations/26344098"
target="_blank">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:<a href="http://www.u
niprot.org/citations/7852410"
target="_blank">7852410,
PubMed:<a href="http://www.uniprot.org/ci
tations/9315851"
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PubMed:<a href="http://www.uniprot.org/ci
tations/19764761"
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PubMed:<a href="http://www.uniprot.org/ci
tations/25043379"
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PubMed:<a href="http://www.uniprot.org/ci
tations/28190768"
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PubMed:<a href="http://www.uniprot.org/ci
tations/29954836"
target="_blank">29954836). Serine ADP- ribosylation of proteins constitutes the primary form of ADP- ribosylation of proteins in response to DNA damage (PubMed:<a href="http://www.uniprot.org/c
itations/33186521"
target="_blank">33186521). Mainly mediates glutamate and aspartate ADP-ribosylation of target proteins in absence of HPF1 (PubMed:<a href="http://
www.uniprot.org/citations/19764761"
target="_blank">19764761,
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:7852410, PubMed:9315851, PubMed:19764761, PubMed:25043379). Mediates the poly(ADP-ribosyl)ation of a number of proteins, including itself, APLF and CHFR (PubMed:17396150, PubMed:19764761). Also mediates serine ADP-ribosylation of target proteins following interaction with HPF1; HPF1 conferring serine specificity (PubMed:28190768). Probably also catalyzes tyrosine ADP-ribosylation of target proteins following interaction with HPF1 (PubMed:30257210). Catalyzes the poly-ADP-ribosylation of histones in a HPF1-dependent manner (PubMed:27067600). 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:17177976, PubMed:18172500, PubMed:19344625, PubMed:19661379, PubMed:23230272). 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:17177976, PubMed:18172500, PubMed:19344625, PubMed:19661379, PubMed:23230272). 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). 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). With

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

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). 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).

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:<a href="http://www.uniprot.org/citations/27257257"

target="_blank">27257257).

Cellular Location
Nucleus. Nucleus, nucleolus. Chromosome
Note=Localizes to sites of DNA damage.

Cleaved PARP Monoclonal Antibody(Mix) - 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