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# Anti-PARP2 Rabbit Monoclonal Antibody

Catalog # ABO15302

## Product Information

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|---|---|
| **Application** | WB, IF, ICC, FC |
| **Primary Accession** | Q9UGN5 |
| **Host** | Rabbit |
| **Isotype** | IgG |
| **Reactivity** | Rat, Human, Mouse |
| **Clonality** | Monoclonal |
| **Format** | Liquid |
| **Description** | Anti-PARP2 Rabbit Monoclonal Antibody . Tested in WB, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. |

## Additional Information

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| **Gene ID** | 10038 |
| **Other Names** | Poly [ADP-ribose] polymerase 2, PARP-2, hPARP-2, 2.4.2.30, ADP-ribosyltransferase diphtheria toxin-like 2, ARTD2, DNA ADP-ribosyltransferase PARP2, 2.4.2.-, NAD(+) ADP-ribosyltransferase 2, ADPRT-2, Poly[ADP-ribose] synthase 2, pADPRT-2, Protein poly-ADP-ribosyltransferase PARP2, 2.4.2.-, PARP2 {ECO:0000303\|PubMed:20092359, ECO:0000312\|HGNC:HGNC:272} |
| **Calculated MW** | 66206 |
| **Application Details** | WB 1:500-1:2000<br>ICC/IF 1:50-1:200<br>FC 1:30 |
| **Source** | Eukaryota |
| **Contents** | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA. |
| **Clone Names** | Clone: 18P78 |
| **Immunogen** | A synthesized peptide derived from human PARP2 |
| **Purification** | Affinity-chromatography |
| **Storage** | Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles. |

## Protein Information

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|---|---|
| **Name** | PARP2 {ECO:0000303\|PubMed:20092359, ECO:0000312\|HGNC:HGNC:272} |

**Function**

Poly-ADP-ribosyltransferase that mediates poly-ADP- ribosylation of proteins and plays a key role in DNA repair (PubMed:10364231, PubMed:25043379, PubMed:27471034, PubMed:30104678, PubMed:32028527, PubMed:32939087, PubMed:34108479, PubMed:34486521, PubMed:34874266). Mediates glutamate, aspartate or serine 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:25043379, PubMed:30104678, PubMed:30321391). Serine ADP-ribosylation of proteins constitutes the primary form of ADP-ribosylation of proteins in response to DNA damage (PubMed:32939087). Mediates glutamate and aspartate ADP-ribosylation of target proteins in absence of HPF1 (PubMed:25043379). Following interaction with HPF1, catalyzes serine ADP-ribosylation of target proteins; HPF1 conferring serine specificity by completing the PARP2 active site (PubMed:28190768, PubMed:32028527, PubMed:34108479, PubMed:34486521, PubMed:34874266). PARP2 initiates the repair of double-strand 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:10364231, PubMed:32939087, PubMed:34108479). HPF1 initiates serine ADP-ribosylation but restricts the polymerase activity of PARP2 in order to limit the length of poly- ADP-ribose chains (PubMed:34732825, PubMed:34795260). Specifically mediates formation of branched poly-ADP-ribosylation (PubMed:30104678). Branched poly-ADP-ribose chains are specifically recognized by some factors, such as APLF (PubMed:30104678). In addition to proteins, also able to ADP-ribosylate DNA: preferentially acts on 5'-terminal phosphates at DNA strand breaks termini in nicked duplex (PubMed:27471034, PubMed:29361132).

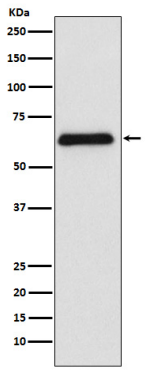
**Cellular Location**

Nucleus. Chromosome. Note=Recruited to DNA damage sites in a PARP1-dependent process: recognizes and binds poly-ADP-ribose chains produced by PARP1 at DNA damage sites via its N-terminus, leading to its recruitment.

**Tissue Location**

Widely expressed, mainly in actively dividing tissues (PubMed:10364231). The highest levels are in the brain, heart, pancreas, skeletal muscle and testis; also detected in kidney, liver, lung, placenta, ovary and spleen; levels are low in leukocytes, colon, small intestine, prostate and thymus (PubMed:10364231)

## Images




Western blot analysis of PARP2 expression in Raji cell lysate.

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