10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PARP2 Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS12716

Specification

PARP2 Antibody (Internal) - Product Information

Application	**IHC**
Primary Accession	Q9UGN5
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**66kDa KDa**

PARP2 Antibody (Internal) - Additional Information

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, NAD(+) ADP-ribosyltransferase 2, ADPRT-2, Poly[ADP-ribose] synthase 2, pADPRT-2, PARP2, ADPRT2, ADPRTL2

Target/Specificity
Human PARP2.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
PARP2 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

PARP2 Antibody (Internal) - Protein Information

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:34486521, PubMed:34874266, PubMed:34108479). 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:34486521, PubMed:34874266, PubMed:34108479). 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)

PARP2 Antibody (Internal) - Protocols

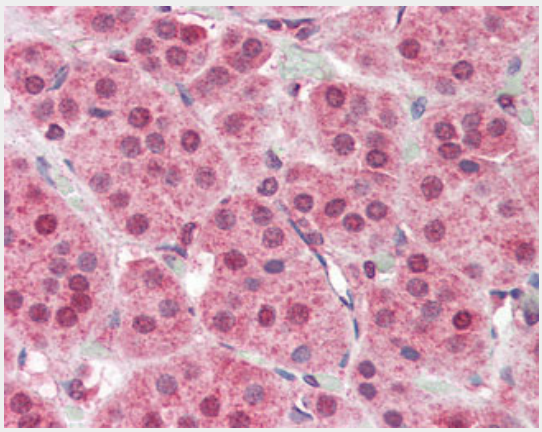
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PARP2 Antibody (Internal) - Images



Anti-PARP2 antibody IHC of human adrenal.

PARP2 Antibody (Internal) - Background

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.

PARP2 Antibody (Internal) - References

Ame J.-C.,et al.J. Biol. Chem. 274:17860-17868(1999).
Johansson M.,et al.Genomics 57:442-445(1999).
Berghammer H.,et al.FEBS Lett. 449:259-263(1999).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Schreiber V.,et al.J. Biol. Chem. 277:23028-23036(2002).