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

Goat Anti-PARP2 Antibody

Peptide-affinity purified goat antibody

Catalog # AF1788a

Specification

Goat Anti-PARP2 Antibody - Product Information

Application	**WB**
Primary Accession	Q9UGN5
Other Accession	NP_005475, 10038
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**66206**

Goat Anti-PARP2 Antibody - 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

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-PARP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PARP2 Antibody - 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:<a href="http://www.uniprot.org/citations/30104678"

target="_blank">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)

Goat Anti-PARP2 Antibody - 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

Goat Anti-PARP2 Antibody - Images

AF1788a (1 µg/ml) staining of Human Spleen Lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-PARP2 Antibody - Background

This gene encodes poly(ADP-ribosyl)transferase-like 2 protein, which contains a catalytic domain and is capable of catalyzing a poly(ADP-ribosyl)ation reaction. This protein has a catalytic domain which is homologous to that of poly (ADP-ribosyl) transferase, but lacks an N-terminal DNA binding domain which activates the C-terminal catalytic domain of poly (ADP-ribosyl) transferase. The basic residues within the N-terminal region of this protein may bear potential DNA-binding properties, and may be involved in the nuclear and/or nucleolar targeting of the protein. Two alternatively spliced transcript variants encoding distinct isoforms have been found.

Goat Anti-PARP2 Antibody - References

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
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Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. Am J Hum Genet, 2009 Nov. PMID 19913121.
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