

Goat Anti-PARP2 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1788a**Specification**

Goat Anti-PARP2 Antibody - Product Information

Application	WB
Primary Accession	O9UGN5
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: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 Cytometry](#)
- [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 Thiazolinedione-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.

Variation within DNA repair pathway genes and risk of multiple sclerosis. Briggs FB, et al. Am J Epidemiol, 2010 Jul 15. PMID 20522537.

Crystal structure of the catalytic domain of human PARP2 in complex with PARP inhibitor ABT-888. Karlberg T, et al. Biochemistry, 2010 Feb 16. PMID 20092359.

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.

LMTK2 and PARP-2 gene polymorphism and azoospermia secondary to meiotic arrest. Sakugawa N, et al. J Assist Reprod Genet, 2009 Sep-Oct. PMID 19806447.