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Parg Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7283a

Specification

Parg Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q86W56

Parg Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 670;8505

Other Names
Poly(ADP-ribose) glycohydrolase, PARG

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7283a was selected from the N-term region of human Parg. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Parg Antibody (N-term) Blocking Peptide - Protein Information

Name PARG {ECO:0000303|PubMed:14527731, ECO:0000312|HGNC:HGNC:8605}

Function
Poly(ADP-ribose) glycohydrolase that degrades poly(ADP- ribose) by hydrolyzing the ribose-ribose bonds present in poly(ADP- ribose) (PubMed:15450800, PubMed:21892188, PubMed:23102699, PubMed:23474714, PubMed:33186521, PubMed:34321462, PubMed:34019811). PARG acts both as an endo- and exoglycosidase, releasing poly(ADP- ribose) of different length as well as ADP-ribose monomers (PubMed:23102699, PubMed:23481255). It is however

unable to cleave the ester bond between the terminal ADP-ribose and ADP-ribosylated residues, leaving proteins that are mono-ADP-ribosylated (PubMed:21892188, PubMed:23474714, PubMed:33186521). Poly(ADP-ribose) is synthesized after DNA damage is only present transiently and is rapidly degraded by PARG (PubMed:23102699, PubMed:34019811). Required to prevent detrimental accumulation of poly(ADP-ribose) upon prolonged replicative stress, while it is not required for recovery from transient replicative stress (PubMed:24906880). Responsible for the prevalence of mono-ADP-ribosylated proteins in cells, thanks to its ability to degrade poly(ADP-ribose) without cleaving the terminal protein-ribose bond (PubMed:33186521). Required for retinoid acid- dependent gene transactivation, probably by removing poly(ADP-ribose) from histone demethylase KDM4D, allowing chromatin derepression at RAR- dependent gene promoters (PubMed:23102699). Involved in the synthesis of ATP in the nucleus, together with PARP1, NMNAT1 and NUDT5 (PubMed:27257257). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:27257257).

Cellular Location
[Isoform 1]: Nucleus Note=Colocalizes with PCNA at replication foci (PubMed:21398629) Relocalizes to the cytoplasm in response to DNA damage (PubMed:16460818). [Isoform 3]: Cytoplasm [Isoform 5]: Mitochondrion matrix

Tissue Location
Ubiquitously expressed.

Parg Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

Parg Antibody (N-term) Blocking Peptide - Images

Parg Antibody (N-term) Blocking Peptide - Background

Poly(ADP-ribose) glycohydrolase (PARG) is the major enzyme responsible for the catabolism of poly(ADP-ribose), a reversible covalent-modifier of chromosomal proteins. The protein is found in many tissues and may be subject to proteolysis generating smaller, active products.

Parg Antibody (N-term) Blocking Peptide - References

Meyer,R.G., Exp. Cell Res. 313 (13), 2920-2936 (2007)Fisher,A.E., Mol. Cell. Biol. 27 (15), 5597-5605 (2007)Keil,C., J. Biol. Chem. 281 (45), 34394-34405 (2006)