

# Parg Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7283B

## Product Information

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Application	IHC-P, WB, E
Primary Accession	<a href="#">Q86W56</a>
Other Accession	<a href="#">Q88622</a>
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14201;RB14549
Calculated MW	111110
Antigen Region	390-421

## Additional Information

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Gene ID	8505
Other Names	Poly(ADP-ribose) glycohydrolase, PARG
Target/Specificity	This Parg antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 390-421 amino acids from the C-terminal region of human Parg.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Parg Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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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: <a href="#">15450800</a> , PubMed: <a href="#">21892188</a> , PubMed: <a href="#">23102699</a> ,

PubMed:[23474714](#), PubMed:[33186521](#), PubMed:[34019811](#), PubMed:[34321462](#)). 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.

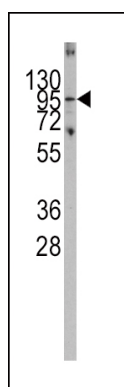
## Background

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.

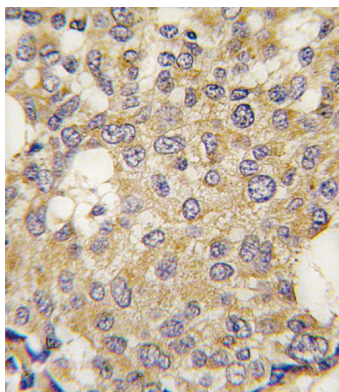
## References

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)

## Images



Western blot analysis of Parg (arrow) using rabbit polyclonal Parg Antibody (C-term) (Cat.#AP7283e).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Parg gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with Parg antibody (C-term) (Cat.#AP7283b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.