Datasheet for ABIN3094440

# PARG Protein (PARG) (AA 1-976) (Strep Tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | PARG |
| Protein Characteristics: | AA 1-976 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This PARG protein is labelled with Strep Tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS), ELISA |

## Product Details

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| Sequence: | MNAGPGCEPC TKRPRWGAAT TSPAASDARS FPSRQRRVLD PKDAHVQFRV PPSSPACVPG RAGQHRGSAT SLVFKQKTIT SWMDTKGIKT AESESLDSKE NNNTRIESMM SSVQKDNFYQ HNVEKLENVS QLSLDKSPTE KSTQYLNQHQ TAAMCKWQNE GKHTEQLLES EPQTVTLVPE QFSNANIDRS PQNDDHSDTD SEENRDNQQF LTTVKLANAK QTTEDEQARE AKSHQKCSKS CDPGEDCASC QQDEIDVVPE SPLSDVGSED VGTGPKNDNK LTRQESCLGN SPPFEKESEP ESPMDVDNSK NSCQDSEADE ETSPGFDEQE DGSSSQTANK PSRFQARDAD IEFRKRYSTK GGEVRLHFQF EGGESRTGMN DLNAKLPGNI SSLNVECRNS KQHGKKDSKI TDHFMRLPKA EDRRKEQWET KHQRTERKIP KYVPPHLSPD KKWLGTPIEE MRRMPRCGIR LPLLRPSANH TVTIRVDLLR AGEVPKPFPT HYKDLWDNKH VKMPCSEQNL YPVEDENGER TAGSRWELIQ TALLNKFTRP QNLKDAILKY NVAYSKKWDF TALIDFWDKV LEEAEAQHLY QSILPDMVKI ALCLPNICTQ PIPLLKQKMN HSITMSQEQI ASLLANAFFC TFPRRNAKMK SEYSSYPDIN FNRLFEGRSS RKPEKLKTLF CYFRRVTEKK PTGLVTFTRQ SLEDFPEWER CEKPLTRLHV |

TYEGTIEENG QGMLQVDFAN RFVGGGVTSA GLVQEEIRFL INPELIISRL FTEVLDHNEC LIITGTEQYS EYTGYAETYR WSRSHEDGSE RDDWQRRCTE IVAIDALHFR RYLDQFVPEK MRRELNKAYC GFLRPGVSSE NLSAVATGNW GCGAFGGDAR LKALIQILAA AAAERDVVYF TFGDSELMRD IYSMHIFLTE RKLTVGDVYK LLLRYYNEEC RNCSTPGPDI KLYPFIYHAV ESCAETADHS GQRTGT

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its

## Product Details

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| | specific reference buffer.<br>• We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein. |
| Purification: | Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):<br>1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.<br>2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot. |
| Purity: | >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. |
| Endotoxin Level: | Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg) |

## Target Details

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| Target: | PARG |
| Alternative Name: | PARG (PARG Products) |
| Background: | Poly(ADP-ribose) glycohydrolase (EC 3.2.1.143),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 |

## Target Details

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| | chromatin remodeling events that are energy-consuming (PubMed:27257257). {ECO:0000269\|PubMed:15450800, ECO:0000269\|PubMed:21892188, ECO:0000269\|PubMed:23102699, ECO:0000269\|PubMed:23474714, ECO:0000269\|PubMed:23481255, ECO:0000269\|PubMed:24906880, ECO:0000269\|PubMed:27257257, ECO:0000269\|PubMed:33186521, ECO:0000269\|PubMed:34019811, ECO:0000269\|PubMed:34321462}. |
| Molecular Weight: | 111.1 kDa |
| UniProt: | Q86W56 |

## Application Details

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| Application Notes: | In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Comment: | ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.<br>During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein! |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |

 

## Handling

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| Expiry Date: | Unlimited (if stored properly) |

 