

Recombinant Human Poly (ADP-ribose) Polymerase 1

Cat. No. PARP1-1658H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PARP1 expressed by Baculovirus is a 116.0 kDa homodimeric protein.
Species	Human
Source	Insect Cells
Description	PARP1 also known as NAD ADP-ribosyltransferase 1 or poly [ADP-ribose] synthase 1 is an enzyme that in humans is encoded by the PARP1 gene. PARP1 Enzyme, is highly purified and enzymatically active human PARP1, expressed in a baculovirus expression system. Upon addition of NAD ⁺ and cofactors the PARP1 is automodified by the addition of ADP-ribose monomers to form poly (ADP-ribose) polymer.
Biological Activity	1000 U/vial, specific activity = 20000 U/mg PARP1. 1U =10 fmol ADP-ribose incorporated into 5 µg immobilized histone in 30 min at room temperature. Note: Activity measurements are approximate values.
Molecular Weight	116.0 kDa
Form	Lyophilized solid.
Appearance	Liquid
Reconstitution	Spin tube in a microfuge for 15 sec to sediment lyophilized material. Carefully open the vial and add 100 µL dH ₂ O. Vortex gently for 20 sec (avoid air bubbles). Let

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stand for 5 min. Carefully triturate the sample 10-times using a pipetman (avoid air bubbles). Spin briefly in microfuge to consolidate. Upon reconstitution with 100 μ L dH₂O, the final concentrations are as follows: 0.5 mg/mL PARP1 enzyme, 20 mM Tris, pH 8, 0.3 M NaCl, 0.1 mM EDTA, 1 mM DTT, plus lyophilization stabilizers.

Purity $\geq$ 95% by SDS-PAGE

Storage Store reconstituted solution at -70°C. Avoid multiple freeze-thaw cycles. There is loss of PARP enzymatic activity upon each free/thaw cycle. It is suggested to aliquot the reconstituted enzyme into multiple tubes and freeze at -70°C. Alternatively, add glycerol at 1:1 vol/vol to the reconstituted PARP1, mix gently by trituration, and store at -20°C (do not store in a frost-free freezer!) for up to 6 months.

GENE INFORMATION

Gene Name PARP1 poly (ADP-ribose) polymerase 1 [Homo sapiens]

Official Symbol PARP1

Synonyms PARP1; poly (ADP-ribose) polymerase 1; PARP; PPOL; ADPRT; ADPRT1; PARP-1; ADPRT 1; pADPRT-1; poly [ADP-ribose] polymerase 1; OTTHUMP00000035663; poly(ADP-ribose) polymerase; poly(ADP-ribose) synthetase; poly[ADP-ribose] synthase 1; poly(ADP-ribosyl)transferase; ADP-ribosyltransferase NAD(+); NAD(+) ADP-ribosyltransferase 1; poly (ADP-ribose) polymerase family, member 1; ADP-ribosyltransferase (NAD+; poly (ADP-ribose) polymerase); EC=2.4.2.30

Gene ID 142

mRNA Refseq NM_001618

Protein Refseq NP_001609

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MIM	173870
UniProt ID	P09874
Chromosome Location	1q41-q42
Pathway	BER complex; BER complex; Base excision repair; Caspase cascade in apoptosis; FAS pathway and Stress induction of HSP regulation; Notch-mediated HES/HEY network
Function	DNA binding; NAD binding; NAD+ ADP-ribosyltransferase activity; metal ion binding; protein N-terminus binding; protein binding; transcription factor binding; transferase activity, transferring glycosyl groups; zinc ion binding
PDB rendering based on 1uk0.	

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