

# Recombinant Mouse PARP-1 Protein (His Tag)

Catalog Number:PKSM040501



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

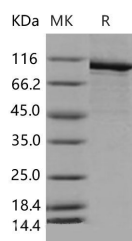
## Description

<b>Synonyms</b>	5830444G22Rik;Adprp;Adprt1;AI893648;ARTD1;C80510;PARP;parp-1;PPOL;sP ARP-1
<b>Species</b>	Mouse
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Trp 1014
<b>Accession</b>	NP_031441.2
<b>Calculated Molecular Weight</b>	115 kDa
<b>Observed molecular weight</b>	75 kDa
<b>Tag</b>	N-His
<b>Bioactivity</b>	Immobilized mouse PARP1 at 10 µg/mL (100 µl/well) can bind biotinylated human HSP70, The EC50 of biotinylated human HSP70 is 0.021 µg/mL.

## Properties

<b>Purity</b>	> 85 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol, 0.1mM TCEP Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the print
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 85 % as determined by reducing SDS-PAGE.

## Background

Poly (ADP-ribose) polymerase 1 (PARP1), also known as NAD(+) ADP-ribosyltransferase 1 (ADPRT), is a chromatin-associated enzyme which modifies various nuclear proteins by poly(ADP-ribosylation). The ADP-D-ribosyl group of NAD<sup>+</sup> is transferred to an acceptor carboxyl group on a histone or the enzyme itself, 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

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20-30 units. The poly(ADP-ribosyl)ation modification is critical for a wide range of processes, including DNA repair, regulation of chromosome structure, transcriptional regulation, mitosis and apoptosis. PARP1 is demonstrated to mediate the poly(ADP-ribose) ation of APLF (aprtaxin PNK-like factor) and CHFR (checkpoint protein with FHA and RING domains), two representative proteins involved in the DNA damage response and checkpoint regulation. Further, It has been suggested that DNA-dependent protein kinase (DNA-PK), another component of DNA repair, suppresses PARP activity, probably through direct binding and/or sequestration of DNA-ends which serve as an important stimulator for both enzymes. PARP1 inhibitors is thus proposed as a targeted cancer therapy for recombination deficient cancers, such as BRCA2 tumors.

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