

Mouse PARP-1 / PARP Protein (His Tag)

Catalog Number: 50753-M07B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

5830444G22Rik; Adprp; Adprt1; AI893648; ARTD1; C80510; PARP; parp-1; PPOL; sPARP-1

Protein Construction:

A DNA sequence encoding the mouse PARP1 (NP_031441.2) (Met 1-Trp 1014) was fused with a polyhistidine tag at the N-terminus.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. 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.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse PARP1 consists of 1033 amino acids and has a calculated molecular mass of 115 kDa. It migrates as an approximately 75 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% gly, 0.1mM TCEP

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

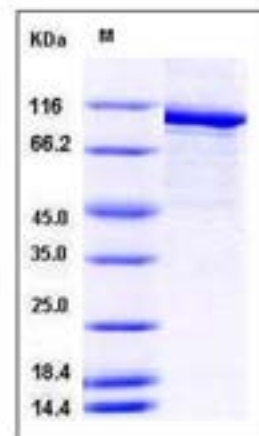
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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-ribose group of NAD⁺ is transferred to an acceptor carboxyl group on a histone or the enzyme itself, and further ADP-ribose groups are transferred to the 2'-position of the terminal adenosine moiety, building up a polymer with an average chain length of 20-30 units. The poly(ADP-ribosylation) 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)ylation of APLF (aprataxin 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 are thus proposed as a targeted cancer therapy for recombination deficient cancers, such as BRCA2 tumors.

References

1. Malanga M. et al., 1998, J Biol Chem. 273: 11839-11843.
2. Ariumi Y. et al., 1999, Oncogene. 18: 4616-4625.
3. Helleday T. et al., 2005, Cell Cycle. 4: 1176-1178.

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