Human PARP-1 / PARP Protein (His Tag)

Catalog Number: **11040-H08B**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ADPRT; ADPRT1; ARTD1; pADPRT-1; PARP; PARP-1; PPOL

Protein Construction:

The amino acids corresponding to the full length of human PARP1 (NP_001609.2) (Met 1-Trp 1014) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized human PARP1 at 10 μg/mL (100 μl/well) can bind? biotinylated human HSP70, The EC_{50} of biotinylated human HSP70 is 0.035 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 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant human PARP1 consists of 1024 amino acids and predicts a molecular mass of 114.5 kDa. The apparent molecular mass of rhPARP1 is approximately 100-110 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

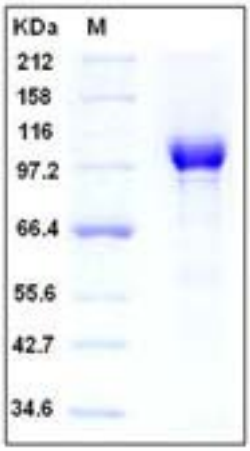
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Poly (ADP-ribose) polymerase 1(PRAP1), also known as NAD(+) ADP-ribosyltransferase 1(ADPRT), is a chromatin-associated enzyme which modifies various nuclear proteins by poly(ADP-ribosyl)ation. The ADP-D-ribosyl group of NAD+ 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 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 demonstrateed to mediate the poly(ADP-ribose) ation 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 is 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.