
Recombinant Human PARP-1 Protein (His Tag)**Cat.NO.: TP08063**

3th Edition

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

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-ribosyl)ation. The ADP-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-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 (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.

Form:PBS**Molecular Weight:**114.5 kDa**Sequences:**Met 1-Trp 1014**Purity:**> 95% by HPLC**Concentration:****Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.