Recombinant Protein Technical Manual

Recombinant Human PARP Protein (His Tag)(Active)

RPES4174

Product Data:

Product SKU: RPES4174

Size: 10µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_001609.2

Protein Information:

Molecular Mass:	114.5 kDa
AP Molecular Mass:	10010 kDa
Tag:	
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 EC50 of biotinylated human HSP70 is 0.035 µg/mL.
Purity:	> 90 % as determined by reducing SDS-PAGE.
Endotoxin:	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage:	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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping:	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation:	Lyophilized from sterile PBS, pH 7.4
Reconstitution:	Please refer to the printed manual for detailed information.
Application:	Functional ELISA
Synonyms:	ADPRT;ADPRT1;ARTD1;pADPRT;PARP;PARP;PPOL

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Immunogen Information:

Sequence: Met 1-Trp 1014

Background:

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.