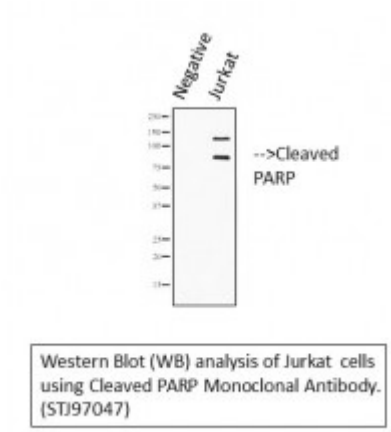
Anti-Cleaved PARP antibody



Western Blot (WB) analysis of Jurkat cells using Cleaved PARP Monoclonal Antibody. (STJ97047)

Description	Cleaved-PARP-1 is a protein encoded by the PARP1 gene which is approximately 113 kDa. Cleaved-PARP-1 is localised to the nucleus. It is involved in telomere C-strand synthesis, transcription-coupled nucleotide excision repair and survival caspase cascades. It is a chromatin-associated enzyme, which modifies various nuclear proteins by poly(ADP-ribosyl)ation. The modification is DNA dependent and is involved in the regulation of various important cellular processes such as differentiation, proliferation, and tumor transformation. It also pays a role in the regulation of the molecular events involved in the recovery of cell from DNA damage. Cleaved-PARP-1 is expressed in the nervous system, liver, intestine, lung and eye. Mutations in the PARP1 gene may result in diphtheria and hemorrhagic cystitis. The antibody STJ97047 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels Cleaved-PARP-1.

Model	STJ97047
Host	Mouse
Reactivity	Human
Applications	WB
Immunogen	Synthetic Peptide
Gene ID	142
Gene Symbol	PARP1
Dilution range	WB 1:2000-5000
Specificity	The antibody detects endogenous pro and active PARP protein.

Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	Mix
Note	For Research Use Only (RUO).
Protein Name	Poly ADP-ribose polymerase 1 PARP-1 ADP-ribosyltransferase diphtheria toxin-like 1 ARTD1 NAD + ADP-ribosyltransferase 1 ADPRT 1 Poly ADP-ribose synthase 1
Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:270OMIM:173870
Alternative Names	Poly ADP-ribose polymerase 1 PARP-1 ADP-ribosyltransferase diphtheria toxin-like 1 ARTD1 NAD + ADP-ribosyltransferase 1 ADPRT 1 Poly ADP-ribose synthase 1
Function	Involved in the base excision repair (BER) pathway, by catalyzing the poly(ADP-ribosyl)ation of a limited number of acceptor proteins involved in chromatin architecture and in DNA metabolism. This modification follows DNA damages and appears as an obligatory step in a detection/signaling pathway leading to the reparation of DNA strand breaks . Mediates the poly(ADP-ribosyl)ation of APLF and CHFR . Positively regulates the transcription of MTUS1 and negatively regulates the transcription of MTUS2/TIP150. With EEF1A1 and TXK, forms a complex that acts as a T-helper 1 (Th1) cell-specific transcription factor and binds the promoter of IFN-gamma to directly regulate its transcription, and is thus involved importantly in Th1 cytokine production . Required for PARP9 and DTX3L recruitment to DNA damage sites . PARP1-dependent PARP9-DTX3L-mediated ubiquitination promotes the rapid and specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites . Mediates serine ADP-ribosylation of target proteins following interaction with HPF1; HPF1 conferring serine specificity . Mediates the poly(ADP-ribosyl)ation of histones in a HPF1-dependent manner . Involved in the synthesis of ATP in the nucleus, together with NMNAT1, PARG and NUDT5 . Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming .
Cellular Localization	Nucleus Nucleus, nucleolus. Localizes at sites of DNA damage.
Post-translational Modifications	Phosphorylated by PRKDC and TXK. Poly-ADP-ribosylated by PARP2; poly-ADP-ribosylation mediates the recruitment of CHD1L to DNA damage sites . ADP-ribosylated on serine by autocatalysis; serine ADP-ribosylation takes place following interaction with HPF1 . S-nitrosylated, leading to inhibit transcription regulation activity.

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