CUSABIO TECHNOLOGY LLC

🕜 Tel: +1-301-363-4651 🛛 🖂 Email: cusabio@cusabio.com 🥃 Website: www.cusabio.com 🧉

PARP1 Recombinant Monoclonal Antibody

Product Code	CSB-RA258431A0HU	
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.	
Uniprot No.	P09874	
Immunogen	A synthesized peptide derived from human Cleaved PARP	
Species Reactivity	Human	
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200	
Relevance	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 (PubMed:17177976, PubMed:18172500, PubMed:19344625, PubMed:19661379, PubMed:23230272). Mediates the poly(ADP-ribosyl)ation of APLF and CHFR (PubMed:17396150). 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 (PubMed:17177976). Required for PARP9 and DTX3L recruitment to DNA damage sites (PubMed:23230272). PARP1-dependent PARP9-DTX3L-mediated ubiquitination promotes the rapid and specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites (PubMed:23230272). Mediates serine ADP-ribosylation of target proteins following interaction with HPF1; HPF1 conferring serine specificity (PubMed:28190768). Mediates the poly(ADP-ribosyl)ation of histones in a HPF1-dependent manner (PubMed:27067600). Involved in the synthesis of ATP in the nucleus, together with NMNAT1, PARG and NUDT5 (PubMed:27257257). Nuclear ATP generation is required for extensive chromatin remodeling events that are energy-consuming (PubMed:27257257).	
Form	Liquid	
Conjugate	Non-conjugated	
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.	
Purification Method	Affinity-chromatography	
Isotype	Rabbit IgG	
Clonality	Monoclonal	
Product Type	Recombinant Antibody	
Immunogen Species	Homo sapiens (Human)	
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cell biology; Metabolism	

1



CUSABIO TECHNOLOGY LLC

🕜 Tel: +1-301-363-4651 🛛 🖾 Email: cusabio@cusabio.com 🤅 Website: www.cusabio.com 🌘



Gene Names	PARP1	
Clone No.	5H8	
Image		IHC image



ge of CSB-RA258431A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

CUSABIO immunized a rabbit with a synthesized peptide derived from human cleaved PARP to trigger an immune response. Splenocytes were isolated from the immunized rabbit, and RNA was extracted, followed by reverse transcription to convert the RNA into cDNA. The PARP1 antibody gene was amplified using degenerate primers and inserted into a vector. Transfection of the expression vector into a host system enabled the production of recombinant monoclonal antibodies specific to PARP1. These antibodies were purified from the cell culture supernatant using affinity chromatography. The binding specificity and affinity of the PARP1 recombinant monoclonal antibody were validated through ELISA and IHC applications, confirming its selective recognition of human PARP1 protein.