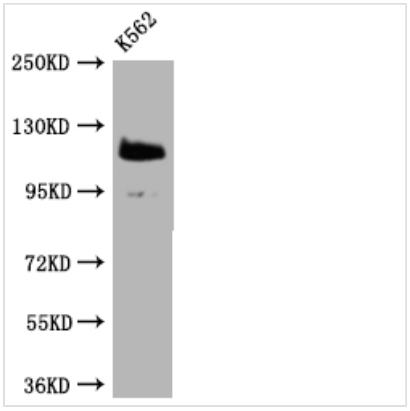
PARP1 Antibody

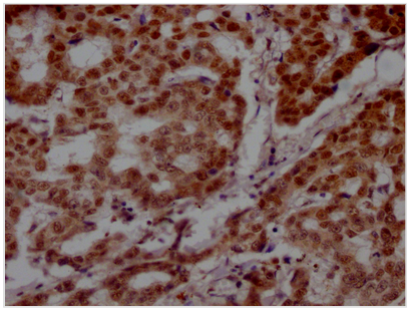
Product Code	CSB-RA160472A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P09874
Immunogen	A synthesized peptide derived from human PARP
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Involved 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

Gene Names	PARP1
Accession NO.	7C11

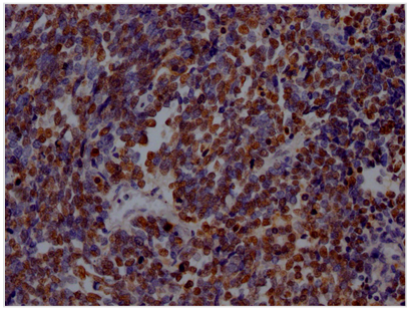
Image



Western Blot
Positive WB detected in: K562 whole cell lysate
All lanes: PARP antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 114 kDa
Observed band size: 114 kDa



IHC image of CSB-RA160472A0HU diluted at 1:100 and staining in paraffin-embedded human breast 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°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA160472A0HU 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°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

PARP1, the most abundant and well-studied poly(ADP-ribose) polymerase (PARP), is a versatile enzyme that is involved in transcription, splicing, polyadenylation, stability, export, and ribosome assembly, among other cellular activities. PARP1's catalytic activity contributes to mediating multiple DNA damage repair pathways. PARP1 is important for the stability of DNA replication forks. As a result, PARP1 inhibition is being used in clinical trials to treat a variety of malignancies, including DNA repair-deficient ovarian, breast, and prostate cancers.

The PARP1 antibody genes were cloned from B cells that were derived from immunized animals with A synthesized peptide derived from human PARP and then introduced into the plasma vectors, which were transfected into mammalian

cell lines for up-scaling expression. The product was purified by A synthesized peptide derived from human PARP to obtain the recombinant antibody against PARP1. This recombinant PARP1 antibody is reactive with the PARP1 protein from Human. It is recommended for use in the ELISA, WB, IHC.