#5625 Store at -20°C

Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 09/15/16

For Research Use Only. Not For Use In Diagnostic Procedures.

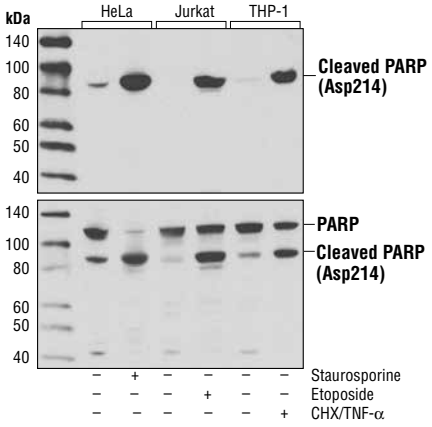
Entrez-Gene ID #142
UniProt ID #P09874

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC, F Endogenous	H, Mk	89 kDa	Rabbit IgG**

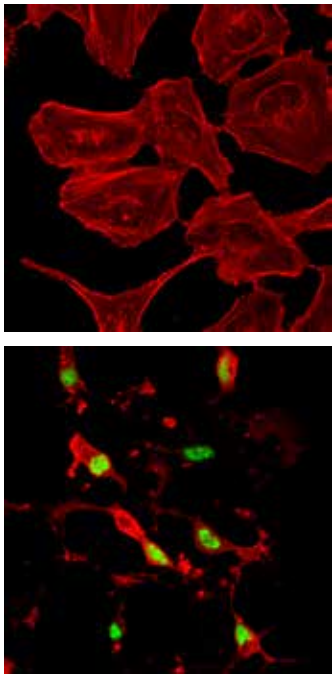
Background: PARP, a 116 kDa nuclear poly (ADP-ribose) polymerase, appears to be involved in DNA repair in response to environmental stress (1). This protein can be cleaved by many ICE-like caspases *in vitro* (2,3) and is one of the main cleavage targets of caspase-3 *in vivo* (4,5). In human PARP, the cleavage occurs between Asp214 and Gly215, which separates the PARP amino-terminal DNA binding domain (24 kDa) from the carboxy-terminal catalytic domain (89 kDa) (2,4). PARP helps cells to maintain their viability; cleavage of PARP facilitates cellular disassembly and serves as a marker of cells undergoing apoptosis (6).

Specificity/Sensitivity: Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb detects endogenous levels of the large fragment (89 kDa) of human PARP1 protein produced by caspase cleavage. The antibody does not recognize full length PARP1 or other PARP isoforms.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp214 in human PARP.



Western blot analysis of extracts from HeLa cells, untreated or treated with Staurosporine #9953 (1 µM, 3 hr), Jurkat cells, untreated or etoposide-treated (25 µM, overnight), and THP-1 cells, untreated or cycloheximide-treated (CHX, 10 µg/ml, overnight) followed by treatment with TNF-α #8902 (20 ng/ml, 4 hr), using Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb (upper), or total PARP Antibody #9542 (lower).



◀ *Confocal immunofluorescent analysis of HeLa cells, serum starved (top) or treated with Staurosporine #9953 (bottom), using Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb (green) and βActin (8H10D10) Mouse mAb #3700 (red).*

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:50†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†*Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.*

Immunofluorescence (IF-IC)	1:400
Flow Cytometry	1:400

For application specific protocols please see the web page for this product at www.cellsignal.com.

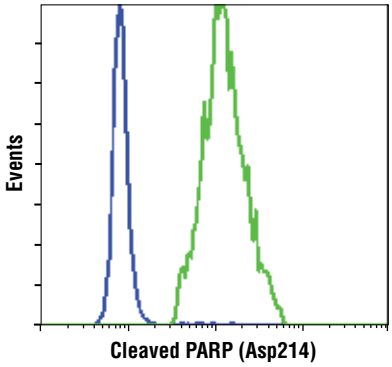
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

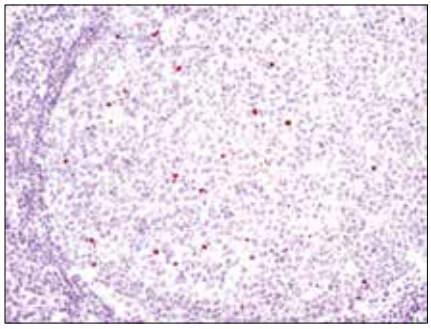
(1) Satoh, M.S. and Lindahl, T. (1992) *Nature* 356, 356-358.
(2) Lazebnik, Y. A. et al. (1994) *Nature* 371, 346-347.
(3) Cohen, G.M. (1997) *Biochem. J.* 326, 1-16.
(4) Nicholson, D. W. et al. (1995) *Nature* 376, 37-43.
(5) Tewari, M. et al. (1995) *Cell* 81, 801-809.
(6) Oliver, F.J. et al. (1998) *J. Biol. Chem.* 273, 33533-33539.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Flow cytometric analysis of Jurkat cells, untreated (blue) or etoposide-treated (green), using Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human tonsil using Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb.