#5625 Store at -20°C

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

☐ Small 100 µl (10 western blots)

☐ Petite 40 µl (4 western blots)

rev. 06/10/11

Cell Signaling TECHNOLOGY®

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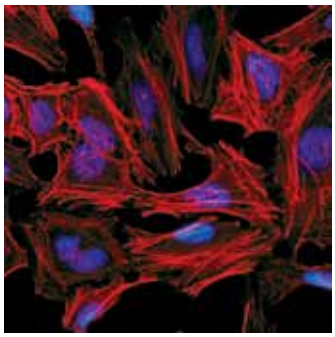
Entrez-Gene ID #142
Swiss-Prot Acc. #P09874

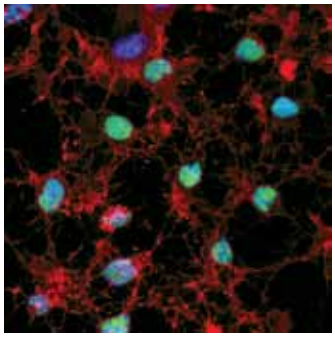
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC, F Endogenous	H, Mk	89 kDa	Rabbit IgG**

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).

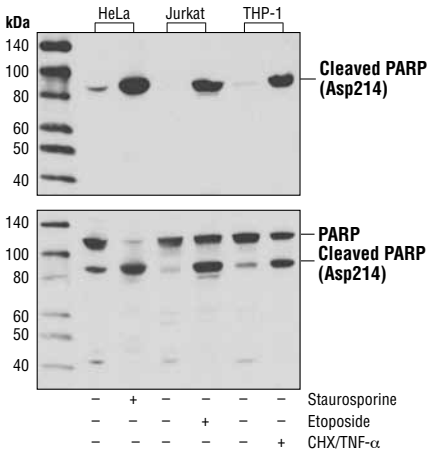
Specificity/Sensitivity: Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb detects endogenous levels of the large fragment (89 kDa) of human PARP1 protein produced by caspase cleavage. The antibody does not recognize full length PARP1 or other PARP isoforms.

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





◀ *Confocal immunofluorescent analysis of HeLa cells, untreated (upper) or treated with Staurosporine #9953 (lower), using Cleaved PARP (Asp214) (D64E10) XP® Rabbit mAb (green). Actin filaments were labeled with DY-554 phalloidin. Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).*



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).

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)	1:800
Flow Cytometry	1:100

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.

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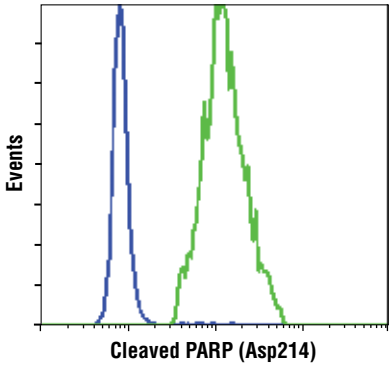
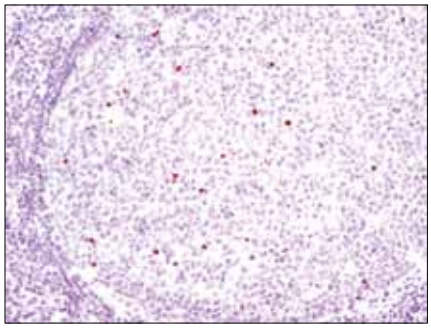
Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

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.

#9532 Store at -20°C

PARP (46D11) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #142
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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, M, R, Mk	116, 89 kDa	Rabbit IgG**

Background: PARP, a 116 kDa nuclear poly (ADP-ribose) polymerase, appears to be involved in DNA repair predominantly 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 PARP's amino-terminal DNA binding domain (24 kDa) from its carboxy-terminal catalytic domain (89 kDa) (2,4). PARP is important for cells to maintain their viability; cleavage of PARP facilitates cellular disassembly and serves as a marker of cells undergoing apoptosis (6).

Specificity/Sensitivity: PARP (46D11) Rabbit mAb detects endogenous levels of total full-length PARP and the large fragment (89 kDa) produced by caspase cleavage.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly623 of PARP.

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.
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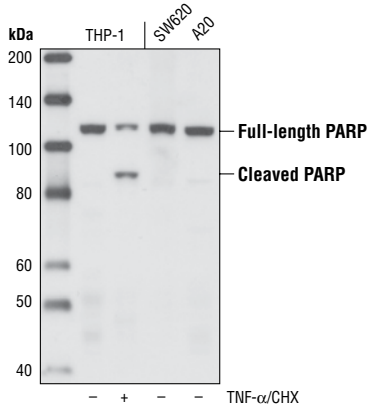
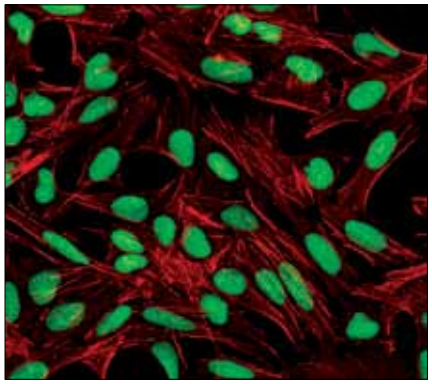


Western blot analysis of extracts from THP-1 cells with or without treatment with TNF-α and cycloheximide as well as control extracts from SW620 and A20 cell lines, using PARP (46D11) Rabbit mAb.



Confocal immunofluorescent analysis of untreated HeLa cells labeled with PARP (46D11) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (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	1:200
Immunofluorescence (IF-IC)	1:800

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

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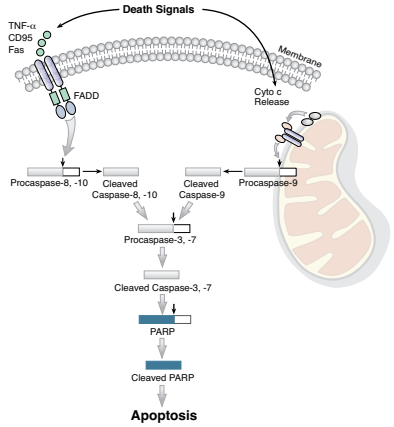

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patents No. 5,675,063 and 7,429,487) from Epitomics, Inc.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
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