PARP (46D11) Rabbit mAb

**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:** PARP (46D11) Rabbit mAb detects endogenous levels of total full-length PARP-1 and the large fragment (89 kDa) produced by caspase cleavage at Asp214. This antibody does not cross-react with PARP-2 and PARP-3.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly623 of human PARP-1.

**Applications**

<table>
<thead>
<tr>
<th>Applications</th>
<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
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<tr>
<td>W, IP, IF-IC, F</td>
<td>H, M, R, Mk</td>
<td>116, 89 kDa</td>
<td>Rabbit IgG**</td>
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</tbody>
</table>

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000
- Immunoprecipitation: 1:200
- Immunofluorescence (IF-IC): 1:400–1:1600
- Flow Cytometry: 1:100–1:400

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

**Background References:**

**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.

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

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**Important:** For western blots, incubate membrane with diluted HeLa cells labeled with PARP (46D11) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red).

**Flow cytometric analysis of Jurkat cells using PARP (46D11) Rabbit mAb (solid line) compared to concentration-matched Rabbit (DA1E) mAb IgG XP® Isotype Control #9001 (dashed line). Anti-rabbit IgG (H+L), F(ab')2 Fragment (Alexa Fluor® 488 Conjugate) #4412 was used as a secondary antibody.**

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