

**Ubiquityl-PCNA (Lys164) (D5C7P) Rabbit mAb**

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 44	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P12004	<b>Entrez-Gene Id:</b> 5111
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**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**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.

**Specificity/Sensitivity**

Ubiquityl-PCNA (Lys164) (D5C7P) Rabbit mAb recognizes endogenous levels of PCNA protein only when ubiquitinated at Lys164.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys164 of human PCNA protein.

**Background**

Proliferating cell nuclear antigen (PCNA) is a member of the DNA sliding clamp family of proteins that assist in DNA replication (1). Crystal structure data suggests that a PCNA homotrimer ring can encircle and slide along the DNA double helix (2). Multiple proteins involved in DNA replication, DNA repair, and cell cycle control bind to PCNA rather than directly associating with DNA, thus facilitating fast processing of DNA (reviewed in 3). PCNA protein expression is a well-accepted marker of proliferation. PCNA is mono-ubiquitinated at Lys164 in response to DNA damage at stalled replication forks. This modification is important in the translesion synthesis (TLS) DNA repair pathway (reviewed in 4,5).

**Background References**

1. Kelman, Z. and O'Donnell, M. (1995) *Nucleic Acids Res* 23, 3613-20.
2. Krishna, T.S. et al. (1994) *Cell* 79, 1233-43.
3. Maga, G. and Hubscher, U. (2003) *J Cell Sci* 116, 3051-60.
4. Lee, K.Y. and Myung, K. (2008) *Mol Cells* 26, 5-11.
5. Chen, J. et al. (2011) *Cell Biochem Biophys* 60, 47-60.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human

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