

#8831 Store at -20C

## p21 Waf1/Cip1 (12D1) Rabbit mAb (Biotinylated)



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H Mk	Endogenous	21	Rabbit IgG	#P38936	1026

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
<b>Specificity / Sensitivity</b>	p21 Waf1/Cip1 (12D1) Rabbit mAb (Biotinylated) detects endogenous levels of total p21 protein. The antibody does not cross-react with other CDK inhibitors.	
<b>Species predicted to react based on 100% sequence homology:</b>	Dog	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human p21 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated p21 Waf1/Cip1 (12D1) Rabbit mAb #2947.	

MW (kDa)

21

<b>Background</b>	The tumor suppressor protein p21 Waf1/Cip1 acts as an inhibitor of cell cycle progression. It functions in stoichiometric relationships forming heterotrimeric complexes with cyclins and cyclin-dependent kinases. In association with CDK2 complexes, it serves to inhibit kinase activity and block progression through G1/S (1). However, p21 may also enhance assembly and activity in complexes of CDK4 or CDK6 and cyclin D (2). The carboxy-terminal region of p21 is sufficient to bind and inhibit PCNA, a subunit of DNA polymerase, and may coordinate DNA replication with cell cycle progression (3). Upon UV damage or during cell cycle stages when cdc2/cyclin B or CDK2/cyclin A are active, p53 is phosphorylated and upregulates p21 transcription via a p53-responsive element (4). Protein levels of p21 are downregulated through ubiquitination and proteasomal degradation (5).
<b>Background References</b>	<ol style="list-style-type: none"><li>1. Pestell, R.G. et al. (1999) <i>Endocrine Rev.</i> 20, 501-34.</li><li>2. Cheng, J. et al. (1999) <i>EMBO J.</i> 18, 1571-83.</li><li>3. Flores-Rozas, H. et al. (1994) <i>Proc. Natl. Acad. Sci. USA</i> 91, 8655-9.</li><li>4. Wang, Y. and Prives, C. (1995) <i>Nature</i> 376, 88-91.</li><li>5. Sheaff, R.J. et al. (2000) <i>Cell</i> 101, 403-10.</li></ol>

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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