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#8493

## p21 Waf1/Cip1 (12D1) Rabbit mAb (Alexa Fluor® 555 Conjugate)



**Cell Signaling**  
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<b>Applications:</b> IF-IC	<b>Reactivity:</b> H Mk	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P38936	<b>Entrez-Gene Id:</b> 1026
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<b>Product Usage Information</b>	<b>Application</b> Immunofluorescence (Immunocytochemistry)	<b>Dilution</b> 1:50
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
<b>Specificity / Sensitivity</b>	p21 Waf1/Cip1 (12D1) Rabbit mAb (Alexa Fluor® 555 Conjugate) recognizes 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 Alexa Fluor® 555 fluorescent dye and tested in-house for immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated p21 Waf1/Cip1 (12D1) Rabbit mAb #2947.	
<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>Applications Key</b>	<b>IF-IC:</b> Immunofluorescence (Immunocytochemistry)
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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