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## Phospho-Rb (Ser807/811) (D20B12) XP<sup>®</sup> Rabbit mAb (Alexa Fluor<sup>®</sup> 488 Conjugate)

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

<b>Applications:</b> IF-IC, FC-FP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P06400	<b>Entrez-Gene Id:</b> 5925
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Product Usage Information	Application	Dilution
	Immunofluorescence (Immunocytochemistry) Flow Cytometry (Fixed/Permeabilized)	1:1600 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>	Phospho-Rb (Ser807/811) (D20B12) XP <sup>®</sup> Rabbit mAb (Alexa Fluor <sup>®</sup> 488 Conjugate) recognizes endogenous levels of Rb protein only when phosphorylated at Ser807, Ser811, or at both sites. This antibody does not cross-react with Rb phosphorylated at Ser608.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser807/811 of human Rb protein.	
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor <sup>®</sup> 488 fluorescent dye and tested in-house for direct flow cytometric and immunofluorescent analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Rb (Ser807/811) (D20B12) XP <sup>®</sup> Rabbit mAb #8516.	
<b>Background</b>	The retinoblastoma tumor suppressor protein Rb regulates cell proliferation by controlling progression through the restriction point within the G1-phase of the cell cycle (1). Rb has three functionally distinct binding domains and interacts with critical regulatory proteins including the E2F family of transcription factors, c-Abl tyrosine kinase, and proteins with a conserved LXCXE motif (2-4). Cell cycle-dependent phosphorylation by a CDK inhibits Rb target binding and allows cell cycle progression (5). Rb inactivation and subsequent cell cycle progression likely requires an initial phosphorylation by cyclin D-CDK4/6 followed by cyclin E-CDK2 phosphorylation (6). Specificity of different CDK/cyclin complexes has been observed <i>in vitro</i> (6-8) and cyclin D1 is required for Ser780 phosphorylation <i>in vivo</i> (9).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Sherr, C.J. (1996) <i>Science</i> 274, 1672-7.</li> <li>Nevins, J.R. (1992) <i>Science</i> 258, 424-9.</li> <li>Welch, P.J. and Wang, J.Y. (1993) <i>Cell</i> 75, 779-90.</li> <li>Hu, Q.J. et al. (1990) <i>EMBO J</i> 9, 1147-55.</li> <li>Knudsen, E.S. and Wang, J.Y. (1997) <i>Mol Cell Biol</i> 17, 5771-83.</li> <li>Lundberg, A.S. and Weinberg, R.A. (1998) <i>Mol Cell Biol</i> 18, 753-61.</li> <li>Connell-Crowley, L. et al. (1997) <i>Mol Biol Cell</i> 8, 287-301.</li> <li>Kitagawa, M. et al. (1996) <i>EMBO J</i> 15, 7060-9.</li> <li>Geng, Y. et al. (2001) <i>Proc Natl Acad Sci USA</i> 98, 194-9.</li> </ol>	

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

**Applications Key** **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

**Cross-Reactivity Key** **H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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