

**#9307** Store at -20°C

# Phospho-Rb (Ser780) Antibody


**Cell Signaling**  
TECHNOLOGY®

**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> WB, IP	<b>Reactivity:</b> H R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 110	<b>Source:</b> Rabbit	<b>UniProt ID:</b> #P06400	<b>Entrez-Gene Id:</b> 5925
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<b>Product Usage Information</b>	<b>Application</b> Western Blotting Immunoprecipitation	<b>Dilution</b> 1:1000 1:100
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	Phospho-Rb (Ser780) Antibody detects endogenous levels of Rb only when phosphorylated at Ser780. The antibody does not cross-react with Rb phosphorylated at other sites.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser780 of human Rb. Antibodies are purified by protein A and peptide affinity chromatography.	
<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>	1. Sherr, C.J. (1996) <i>Science</i> 274, 1672-7. 2. Nevins, J.R. (1992) <i>Science</i> 258, 424-9. 3. Welch, P.J. and Wang, J.Y. (1993) <i>Cell</i> 75, 779-90. 4. Hu, Q.J. et al. (1990) <i>EMBO J</i> 9, 1147-55. 5. Knudsen, E.S. and Wang, J.Y. (1997) <i>Mol Cell Biol</i> 17, 5771-83. 6. Lundberg, A.S. and Weinberg, R.A. (1998) <i>Mol Cell Biol</i> 18, 753-61. 7. Connell-Crowley, L. et al. (1997) <i>Mol Biol Cell</i> 8, 287-301. 8. Kitagawa, M. et al. (1996) <i>EMBO J</i> 15, 7060-9. 9. Geng, Y. et al. (2001) <i>Proc Natl Acad Sci USA</i> 98, 194-9.	

<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 <b>IP:</b> Immunoprecipitation
<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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