

**Phospho-Rb (Ser780) (D59B7) Rabbit mAb**

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 110	<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**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:200

**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.

For a carrier free (BSA and azide free) version of this product see product #31704.

**Specificity/Sensitivity**

Phospho-Rb (Ser780) (D59B7) Rabbit mAb recognizes endogenous levels of Rb protein only when phosphorylated at Ser780.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser780 of human Rb protein.

**Background**

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 *in vitro* (6-8) and cyclin D1 is required for Ser780 phosphorylation *in vivo* (9).

**Background References**

1. Sherr, C.J. (1996) *Science* 274, 1672-7.
2. Nevins, J.R. (1992) *Science* 258, 424-9.
3. Welch, P.J. and Wang, J.Y. (1993) *Cell* 75, 779-90.
4. Hu, Q.J. et al. (1990) *EMBO J* 9, 1147-55.
5. Knudsen, E.S. and Wang, J.Y. (1997) *Mol Cell Biol* 17, 5771-83.
6. Lundberg, A.S. and Weinberg, R.A. (1998) *Mol Cell Biol* 18, 753-61.
7. Connell-Crowley, L. et al. (1997) *Mol Biol Cell* 8, 287-301.
8. Kitagawa, M. et al. (1996) *EMBO J* 15, 7060-9.
9. Geng, Y. et al. (2001) *Proc Natl Acad Sci USA* 98, 194-9.

**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 BSA, 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 **M:** Mouse **R:** Rat **Mk:** Monkey

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