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Store at -20C  
#9307

## Phospho-Rb (Ser780) Antibody

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 110	<b>Source/Isotype:</b> Rabbit	<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  
1:100

### Storage

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.

### Specificity/Sensitivity

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.

### Source / Purification

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.

### 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

- Sherr, C.J. (1996) *Science* 274, 1672-7.
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- Knudsen, E.S. and Wang, J.Y. (1997) *Mol Cell Biol* 17, 5771-83.
- Lundberg, A.S. and Weinberg, R.A. (1998) *Mol Cell Biol* 18, 753-61.
- Connell-Crowley, L. et al. (1997) *Mol Biol Cell* 8, 287-301.
- Kitagawa, M. et al. (1996) *EMBO J* 15, 7060-9.
- 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 **R:** Rat **Mk:** Monkey

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