

# Phospho-Retinoblastoma (S780) Antibody

Rabbit mAb

Catalog # AP90304

## Product Information

<b>Application</b>	WB, IHC
<b>Primary Accession</b>	<a href="#">P06400</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	OSRC; RB; p105-Rb; pRb; RB1; pp110; Retinoblastoma 1; PPP1R130
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	106159

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human Retinoblastoma
<b>Description</b>	Cell cycle-dependent phosphorylation by a CDK inhibits Rb target binding and allows cell cycle progression. Rb inactivation and subsequent cell cycle progression likely requires an initial phosphorylation by cyclin D-CDK4/6 followed by cyclin E-CDK2 phosphorylation. Specificity of different CDK/cyclin complexes has been observed in vitro and cyclin D1 is required for Ser780 phosphorylation in vivo.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<b>Name</b>	RB1
<b>Function</b>	Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed: <a href="#">10499802</a> ). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes (PubMed: <a href="#">10499802</a> ). Both physically blocks E2Fs transactivating domain and recruits chromatin- modifying enzymes that actively repress transcription (PubMed: <a href="#">10499802</a> ). Cyclin and CDK-dependent phosphorylation of RB1 induces its dissociation from E2Fs, thereby activating transcription of E2F responsive genes and triggering entry into S phase (PubMed: <a href="#">10499802</a> ). RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C (PubMed: <a href="#">15084261</a> ). Directly involved in heterochromatin formation by maintaining overall chromatin structure and, in particular, that of constitutive heterochromatin by stabilizing histone methylation. Recruits and targets histone methyltransferases SUV39H1, KMT5B and KMT5C, leading

to epigenetic transcriptional repression. Controls histone H4 'Lys-20' trimethylation. Inhibits the intrinsic kinase activity of TAF1. Mediates transcriptional repression by SMARCA4/BRG1 by recruiting a histone deacetylase (HDAC) complex to the c-FOS promoter. In resting neurons, transcription of the c-FOS promoter is inhibited by BRG1- dependent recruitment of a phospho-RB1-HDAC1 repressor complex. Upon calcium influx, RB1 is dephosphorylated by calcineurin, which leads to release of the repressor complex (By similarity).

#### Cellular Location

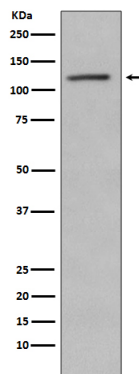
Nucleus. Cytoplasm {ECO:0000250 | UniProtKB:P13405}. Note=During keratinocyte differentiation, acetylation by KAT2B/PCAF is required for nuclear localization (PubMed:20940255). Localizes to the cytoplasm when hyperphosphorylated (By similarity). {ECO:0000250 | UniProtKB:P13405, ECO:0000269 | PubMed:20940255}

#### Tissue Location

Expressed in the retina. Expressed in foreskin keratinocytes (at protein level) (PubMed:20940255)

## Images

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Western blot analysis of Retinoblastoma phosphorylation expression in Jurkat cell lysate treated with Alkaline Phosphatase.

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