

**Anti-RB1 (pT821) Antibody**  
Rabbit polyclonal antibody to RB1 (pT821)  
Catalog # AP61153

### Specification

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#### Anti-RB1 (pT821) Antibody - Product Information

Application	WB, IF
Primary Accession	<a href="#">P06400</a>
Other Accession	<a href="#">P13405</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	106159

#### Anti-RB1 (pT821) Antibody - Additional Information

Gene ID 5925

#### Other Names

Retinoblastoma-associated protein; p105-Rb; pRb; Rb; pp110

#### Target/Specificity

Recognizes endogenous levels of RB1 (pT821) protein.

#### Dilution

WB~~WB (1/500 - 1/1000), IH (1/50 - 1/200), IF/IC (1/100 - 1/500)  
IF~~WB (1/500 - 1/1000), IH (1/50 - 1/200), IF/IC (1/100 - 1/500)

#### Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

#### Storage

Store at -20 °C. Stable for 12 months from date of receipt

#### Anti-RB1 (pT821) Antibody - Protein Information

Name RB1

#### Function

Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed: [10499802](http://www.uniprot.org/citations/10499802)). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes (PubMed: [10499802](http://www.uniprot.org/citations/10499802)). Both physically blocks E2Fs transactivating domain and recruits chromatin-modifying enzymes that actively repress transcription (PubMed: [10499802](http://www.uniprot.org/citations/10499802)). 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="http://www.uniprot.org/citations/10499802" target="\_blank">10499802</a>). RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C (PubMed:<a href="http://www.uniprot.org/citations/15084261" target="\_blank">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

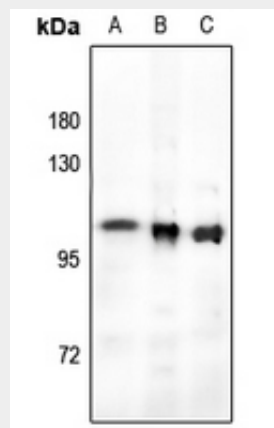
Expressed in the retina. Expressed in foreskin keratinocytes (at protein level) (PubMed:20940255)

### Anti-RB1 (pT821) Antibody - Protocols

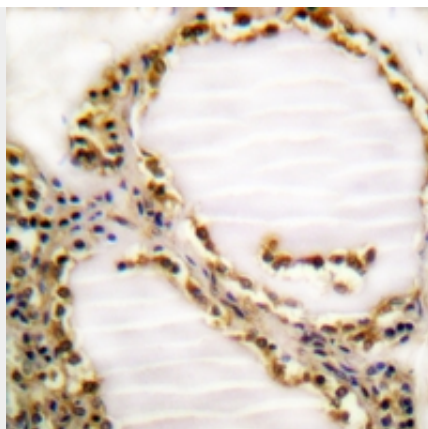
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-RB1 (pT821) Antibody - Images



Western blot analysis of RB1 (pT821) expression in HuT78 (A), Myla2059 (B), MCF7 (C) whole cell lysates.



Immunohistochemical analysis of RB1 (pT821) staining in human testis formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of RB1 (pT821) staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a Alexa Fluor 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

#### **Anti-RB1 (pT821) Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human RB1 (pT821). The exact sequence is proprietary.