

**RB1 Antibody (Center S249)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP16868c**

**Specification**

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**RB1 Antibody (Center S249) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P06400</a>
Other Accession	<a href="#">NP_000312.2</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	227-256

**RB1 Antibody (Center S249) - Additional Information**

**Gene ID** 5925

**Other Names**

Retinoblastoma-associated protein, p105-Rb, pRb, Rb, pp110, RB1

**Target/Specificity**

This RB1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 227-256 amino acids from the Central region of human RB1.

**Dilution**

WB~~1:2000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

RB1 Antibody (Center S249) is for research use only and not for use in diagnostic or therapeutic procedures.

**RB1 Antibody (Center S249) - Protein Information**

**Name** RB1

**Function** Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed:[10499802](#)). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes (PubMed:[10499802](#)). Both physically

blocks E2Fs transactivating domain and recruits chromatin- modifying enzymes that actively repress transcription (PubMed:[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:[10499802](#)). RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C (PubMed:[15084261](#)). 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)

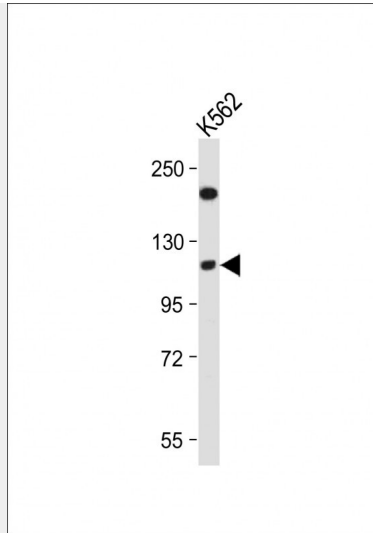
### **RB1 Antibody (Center S249) - Protocols**

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

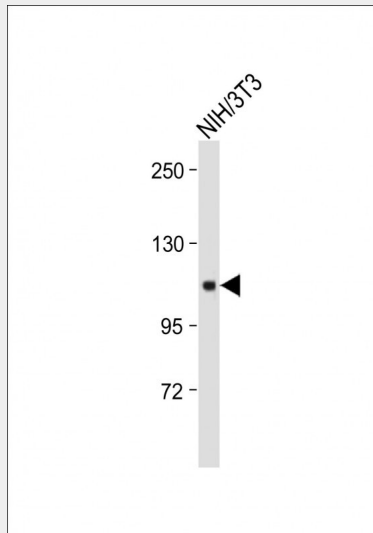
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **RB1 Antibody (Center S249) - Images**





Anti-RB1(Center S249) at 1:2000 dilution + K562 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 106 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-RB1(Center S249) at 1:2000 dilution + NIH/3T3 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 106 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

### **RB1 Antibody (Center S249) - Background**

The protein encoded by this gene is a negative regulator of the cell cycle and was the first tumor suppressor gene found. The encoded protein also stabilizes constitutive heterochromatin to maintain the overall chromatin structure. The active, hypophosphorylated form of the protein binds transcription factor E2F1. Defects in this gene are a cause of childhood cancer retinoblastoma (RB), bladder cancer, and osteogenic sarcoma.

### **RB1 Antibody (Center S249) - References**

Liao, C.C., et al. J. Biol. Chem. 285(43):33134-33143(2010)  
Kim, T.R., et al. Biochem. Biophys. Res. Commun. 400(1):100-105(2010)

Hirschi, A., et al. Nat. Struct. Mol. Biol. 17(9):1051-1057(2010)  
Tooley, C.E., et al. Nature 466(7310):1125-1128(2010)  
Dimaras, H., et al. Transl Res 156(2):91-97(2010)