

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

Specification

RB1 Antibody (Center S249) - Product Information

Application	WB,E
Primary Accession	P06400
Other Accession	NP_000312.2
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

E~~Use at an assay dependent concentration.

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)

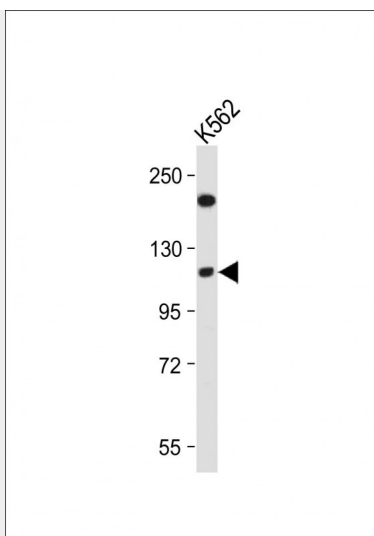
RB1 Antibody (Center S249) - Protocols

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

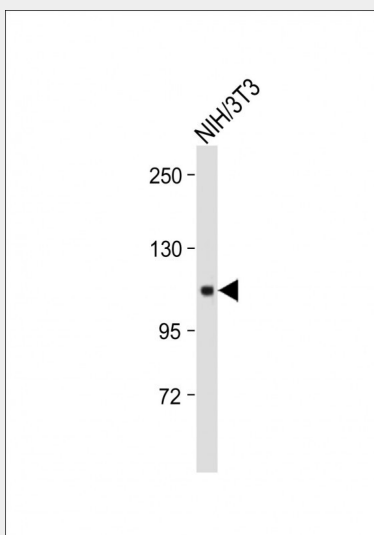
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RB1 Antibody (Center S249) - Images





Anti-RB1(Center S249) at 1:2000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg 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 µg 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)