

Rb Polyclonal Antibody

Catalog # AP72199

Specification

Rb Polyclonal Antibody - Product Information

Application	WB
Primary Accession	P06400
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

Rb Polyclonal Antibody - Additional Information

Gene ID 5925

Other Names

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

Dilution

WB~~Western Blot: 1/500 - 1/2000.
Immunohistochemistry: 1/100 - 1/300.
ELISA: 1/20000. Not yet tested in other
applications.

Format

Liquid in PBS containing 50% glycerol, 0.5%
BSA and 0.02% sodium azide.

Storage Conditions

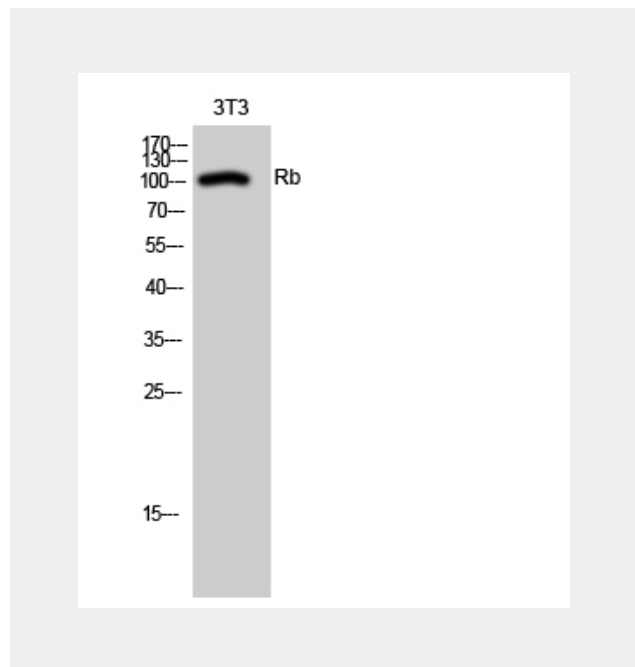
-20°C

Rb Polyclonal Antibody - Protein Information

Name RB1

Function

Tumor suppressor that is a key regulator of
the G1/S transition of the cell cycle
(PubMed:<a href="http://www.uniprot.org/c
itations/10499802"
target="_blank">10499802). The
hypophosphorylated form binds
transcription regulators of the E2F family,
preventing transcription of E2F-responsive
genes (PubMed:<a href="http://www.unipro
t.org/citations/10499802"
target="_blank">10499802). Both



Rb Polyclonal Antibody - Background

Key regulator of entry into cell division that
acts as a tumor suppressor. Promotes G0-G1
transition when phosphorylated by
CDK3/cyclin-C. Acts as a transcription
repressor of E2F1 target genes. The
underphosphorylated, active form of RB1
interacts with E2F1 and represses its
transcription activity, leading to cell cycle
arrest. 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

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).

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Cellular Location

Nucleus. Note=During keratinocyte differentiation, acetylation by KAT2B/PCAF is required for nuclear localization.

Tissue Location

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

Rb Polyclonal 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](#)