

For Research Use Only

# RB1 Monoclonal antibody

Catalog Number: 67521-1-Ig

Featured Product

3 Publications



## Basic Information

Catalog Number:

67521-1-Ig

Size:

150ul, Concentration: 1700 ug/ml by 5925 Nanodrop and 1000 ug/ml by Bradford method using BSA as the standard;

Source:

Mouse

Isotype:

IgG2a

Immunogen Catalog Number:

AG22578

GenBank Accession Number:

BC039060

GeneID (NCBI):

5925

UNIPROT ID:

P06400

Full Name:

retinoblastoma 1

Calculated MW:

928 aa, 106 kDa

Observed MW:

110 kDa

Purification Method:

Protein A purification

CloneNo.:

1A2A6

Recommended Dilutions:

WB 1:1000-1:6000

IHC 1:500-1:2000

IF/ICC 1:200-1:800

## Applications

Tested Applications:

WB, IHC, IF/ICC, ELISA

Cited Applications:

WB

Species Specificity:

human

Cited Species:

human

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

Positive Controls:

WB: Jurkat cells, HL-60 cells, K-562 cells, MCF-7 cells, TF-1 cells

IHC: Insulinoma tissue, rat eye tissue

IF/ICC: SH-SY5Y cells, U2OS cells

## Background Information

RB1, also named as pp110, pRb and p105 Rb, belongs to the retinoblastoma protein (RB) family. It is a key regulator of entry into cell division that acts as a tumor suppressor. RB1 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. It is directly involved in heterochromatin formation by maintaining overall chromatin structure and, in particular, that of constitutive heterochromatin by stabilizing histone methylation. It recruits and targets histone methyltransferases SUV39H1, SUV420H1 and SUV420H2, leading to epigenetic transcriptional repression. RB1 controls histone H4 'Lys-20' trimethylation and inhibits the intrinsic kinase activity of TAF1. It 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. In case of viral infections, interactions with SV40 large T antigen, HPV E7 protein or adenovirus E1A protein induce the disassembly of RB1-E2F1 complex thereby disrupting RB1's activity.

## Notable Publications

Author	Pubmed ID	Journal	Application
Zhenguang Mao	39239764	Environ Toxicol	WB
Burcu Turkoglu	39337855	Life (Basel)	WB
Wei Li	38861362	Cancer Res	WB

## Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

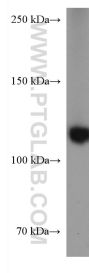
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

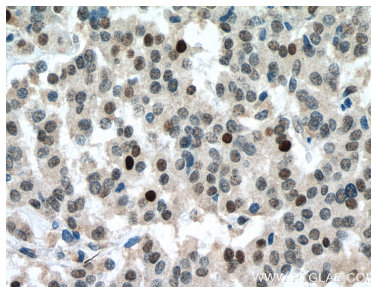
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

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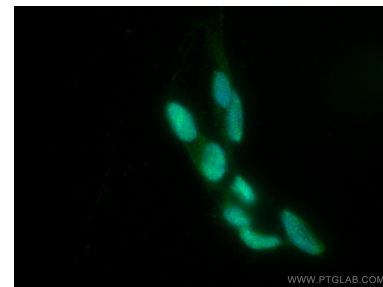
## Selected Validation Data



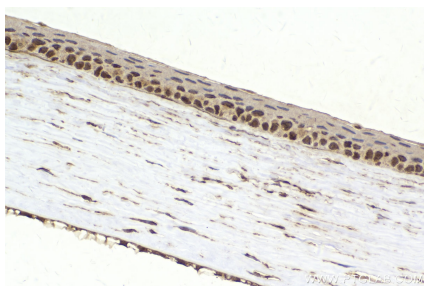
Jurkat cells were subjected to SDS PAGE followed by western blot with 67521-1-Ig (RB1 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded Insulinoma tissue slide using 67521-1-Ig (RB1 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed SH-SY5Y cells using RB1 antibody (67521-1-Ig, Clone: 1A2A6 ) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



Immunohistochemical analysis of paraffin-embedded rat eye tissue slide using 67521-1-Ig (RB1 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).