

For Research Use Only

RB1 Monoclonal antibody

Catalog Number: 67521-1-Ig

Featured Product

4 Publications



Basic Information

Catalog Number:

67521-1-Ig

GenBank Accession Number:

BC039060

Purification Method:

Protein A purification

Size:

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

GeneID (NCBI):

5925

CloneNo.:

1A2A6

Source:

Mouse

UNIPROT ID:

P06400

Recommended Dilutions:

WB 1:1000-1:6000

IHC 1:500-1:2000

IF/ICC 1:200-1:800

Isotype:

IgG2a

Full Name:

retinoblastoma 1

Calculated MW:

928 aa, 106 kDa

Immunogen Catalog Number:

AG22578

Observed MW:

110 kDa

Applications

Tested Applications:

WB, IHC, IF/ICC, ELISA

Positive Controls:

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

Cited Applications:

WB

IHC: Insulinoma tissue, rat eye tissue

Species Specificity:

human

IF/ICC: SH-SY5Y cells, U2OS cells

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

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
Yu Tang	39888288	Adv Sci (Weinh)	WB
Zhenguang Mao	39239764	Environ Toxicol	WB
Burcu Turkoglu	39337855	Life (Basel)	WB

Storage

Storage:

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

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

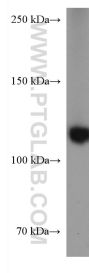
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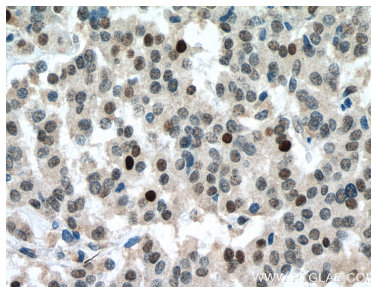
E: proteintech@ptglab.com
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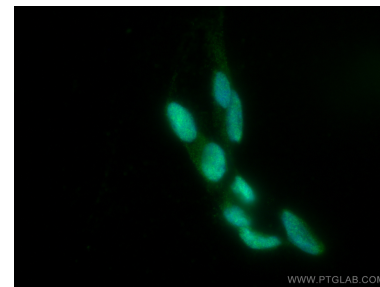
Selected Validation Data



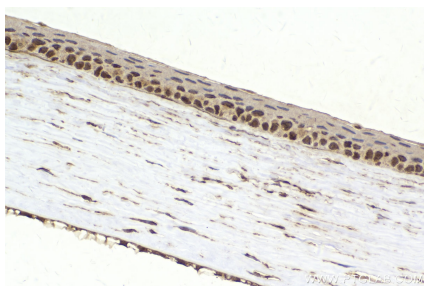
Jurkat cells were subjected to SDS PAGE followed by western blot with 67521-1-Ig (RB1 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



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).