

For Research Use Only

RB1 Monoclonal antibody

Catalog Number: 67521-1-Ig



Basic Information

Catalog Number: 67521-1-Ig	GenBank Accession Number: BC039060	Purification Method: Protein A purification
Size: 150UL, Concentration: 1000 µg/ml by Bradford method using BSA as the standard;	GeneID (NCBI): 5925	CloneNo.: 1A2A6
Source: Mouse	Full Name: retinoblastoma 1	Recommended Dilutions: WB 1:1000-1:6000 IHC 1:500-1:2000
Isotype: IgG2a	Calculated MW: 928 aa, 106 kDa	
Immunogen Catalog Number: AG22578	Observed MW: 110 kDa	

Applications

Tested Applications: IHC, WB, ELISA	Positive Controls:
Species Specificity: Human	WB: Jurkat cells, HL-60 cells, K-562 cells, MCF-7 cells, TF-1 cells
Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0	IHC: Insulinoma tissue,

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.

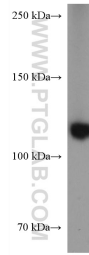
Storage

Storage:
Store at -20°C.
Storage Buffer:
PBS with 0.1% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

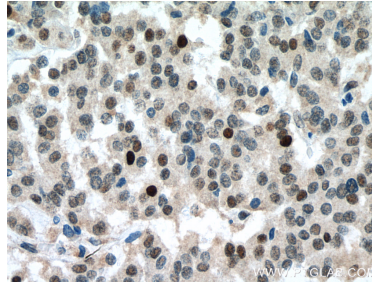
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Selected Validation Data



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).