For Research Use Only

RB1
Polyclonal ANTIBODY

Catalog Number:10048-2-Ig Featured Product 24 Publications

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Basic Information

Catalog Number:
10048-2-Ig

Size:
150 µg/150 µl

Source:
Rabbit

Isotype:
IgG

Purification Method:
Protein A purification

Immunogen Catalog Number:
AG0006

GenBank Accession Number:
BC040540

GeneID (NCBI):
5925

Full Name:
retinoblastoma 1

Calculated MW:
110 kDa

Observed MW:
110 kDa

Recommended Dilutions:
WB 1:600-1:2000
IP 0.5-4.0 ug for IP and 1:500-1:1000 for WB
IHC 1:50-1:200

Applications

Tested Applications:
IHC, IP, WB, ELISA

Cited Applications:
IF, IHC, WB

Species Specificity:
human, mouse

Cited Species:
human, mouse

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; A431 cells

IP : A431 cells;

IHC : human prostate cancer tissue; human lung cancer 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. This antibody is a rabbit polyclonal antibody raised against human RB1 fusion protein.

Notable Publications

Author	Pubmed ID	Journal	Application
Qinghua Wang	29033588	Onco Targets Ther	WB
Q Tu	28892048	Oncogene	IF
Wencheng Ding	25336692	Clin Cancer Res	WB

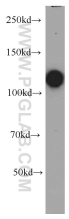
Storage

Storage:
Store at -20ºC. Stable for one year after shipment.
Storage Buffer:
PBS with 0.1% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20˚C storage

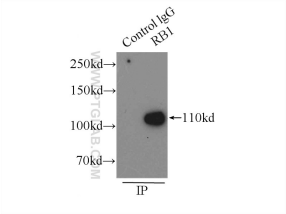
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

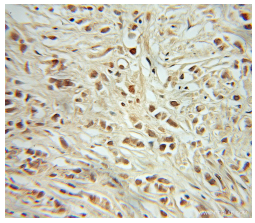
Selected Validation Data



Jurkat cells were subjected to SDS PAGE followed by western blot with 10048-2-Ig(RB1 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours



IP result of anti-RB1(IP:10048-2-Ig, 3ug; Detection:10048-2-Ig 1:500) with A431 cells lysate 3000 ug



Immunohistochemical analysis of paraffin-embedded human prostate cancer using 10048-2-Ig(RB1 antibody) at dilution of 1:200 (under 10x lens)