RB1 Polyclonal ANTIBODY
Catalog Number: 10048-2-Ig

**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 μg for IP and 1:500-1:1000 for WB
- **IHC:** 1:50-1:200

**Applications**
- **IHC, IP, WB, ELISA**
- **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, SUV39H2 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 SMC5/6/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**

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**Storage**
- **Store at:** -20°C. Stable for one year after shipment.
- **Storage Buffer:** RB1 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.
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).