

For Research Use Only

CoraLite® Plus 488-conjugated RB1 Monoclonal antibody

Catalog Number: CL488-67521



Basic Information

Catalog Number:

CL488-67521

Concentration:

1000 µg/ml

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:

IF/ICC: 1:50-1:500

FC (Intra): 0.40 µg per 10⁶ cells in a 100 µl suspension

Excitation/Emission maximum wavelengths:

493 nm / 522 nm

Applications

Tested Applications:

IF/ICC, FC (Intra)

Species Specificity:

human

Positive Controls:

IF/ICC : hTERT-RPE1 cells, SH-SY5Y cells

FC (Intra) : Jurkat cells, HepG2 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.

Storage

Storage:

Store at -20°C. Avoid exposure to light. Stable for one year after shipment.

Storage Buffer:

PBS with 50% glycerol, 0.05% Proclin300, 0.5% BSA, pH7.3

Aliquoting is unnecessary for -20°C storage

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

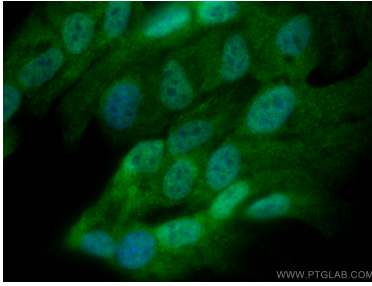
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E: Proteintech-CN@ptglab.com

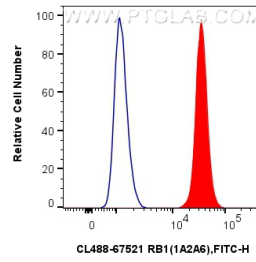
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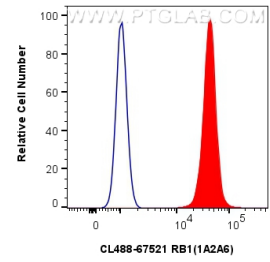
Selected Validation Data



Immunofluorescent analysis of (4% PFA) fixed hTERT-RPE1 cells using CoraLite® Plus 488 RB1 antibody (CL488-67521, Clone: 1A2A6) at dilution of 1:200.



1X10⁶ HepG2 cells were intracellularly stained with 0.4 ug CoraLite® Plus 488 Anti-Human RB1 (CL488-67521, Clone:1A2A6) (red), or 0.4 ug CoraLite® Plus 488 Mouse IgG2a Isotype Control (C1.18.4) (CL488-65208, Clone: C1.18.4) (blue). Cells were fixed and permeabilized with True-Nuclear Transcription Factor Buffer Set.



1X10⁶ Jurkat cells were intracellularly stained with 0.4 ug CoraLite® Plus 488 Anti-Human RB1 (CL488-67521, Clone:1A2A6) (red), or 0.4 ug CoraLite® Plus 488 Mouse IgG2a Isotype Control (C1.18.4) (CL488-65208, Clone: C1.18.4) (blue). Cells were fixed and permeabilized with True-Nuclear Transcription Factor Buffer Set.