

Product Name: Rb Rabbit Polyclonal Antibody
Catalog #: APRab16929



Summary

Production Name	Rb Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC,IF,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	RB1
Alternative Names	RB1; Retinoblastoma-associated protein; p105-Rb; pRb; Rb; pp110
Gene ID	5925.0
SwissProt ID	P06400.The antiserum was produced against synthesized peptide derived from human Retinoblastoma. AA range:751-800

Application

Dilution Ratio	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
Molecular Weight	106kD

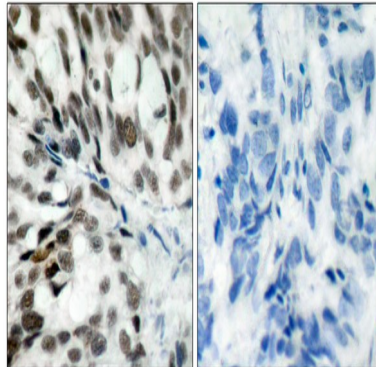
Background

The protein encoded by this gene is a negative regulator of the cell cycle and was the first tumor suppressor gene found. The encoded protein also stabilizes constitutive heterochromatin to maintain the overall chromatin structure. The active, hypophosphorylated form of the protein binds transcription factor E2F1. Defects in this gene are a cause of childhood cancer retinoblastoma (RB), bladder cancer, and osteogenic sarcoma. [provided by RefSeq, Jul 2008],disease:Defects in RB1 are a cause of bladder cancer [MIM:109800],disease:Defects in RB1 are a cause of osteogenic sarcoma [MIM:259500],disease:Defects in RB1 are the cause of childhood cancer retinoblastoma (RB) [MIM:180200]. RB is a congenital malignant tumor that arises from the nuclear layers of the retina. It occurs in about 1:20'000 live births and represents about 2% of childhood malignancies. It is bilateral in about 30% of cases. Although most RB appear sporadically, about 20% are transmitted as an autosomal dominant trait with incomplete penetrance. The diagnosis is usually made before the age of 2 years when strabismus or a gray to yellow reflex from pupil ("cat eye") is investigated.,function:Key regulator of entry into cell division that acts as a tumor suppressor. 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. Directly involved in heterochromatin formation by maintaining overall chromatin structure and, in particular, that of constitutive heterochromatin by stabilizing histone methylation. Recruits and targets histone methyltransferases SUV39H1, SUV420H1 and SUV420H2, leading to epigenetic transcriptional repression. Controls histone H4 'Lys-20' trimethylation. Inhibits the intrinsic kinase activity of TAF1. 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.,online information:RB1 mutation db,online information:Retinoblastoma protein entry,PTM:Phosphorylated in G1, thereby releasing E2F1 which is then able to activate cell growth. Dephosphorylated at the late M phase. SV40 large T antigen, HPV E7 and adenovirus E1A bind to the underphosphorylated, active form of pRb.,similarity:Belongs to the retinoblastoma protein (RB) family.,subunit:Interacts with ATAD5 (By similarity). The hypophosphorylated form interacts with and sequesters the E2F1 transcription factor. The unphosphorylated form interacts with ARID3B, KDM5A, SUV39H1, MJD2A/JHDM3A and THOC1. Interacts with the N-terminal domain of TAF1. Interacts with AATF, DNMT1, LIN9, LMNA, SUV420H1, SUV420H2, PELP1 and TMPO-alpha. May interact with NDC80. Interacts with EID1 and UBR4. Interacts with ARID4A and KDM5B. Interacts with E4F1. Interacts with adenovirus E1A protein, HPV E7 protein and SV40 large T antigen.,tissue specificity:Expressed in the retina.,

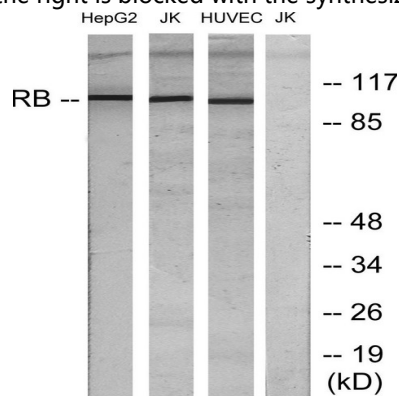
Research Area

Stem cell pathway; Cell_Cycle_G1S;Cell_Cycle_G2M_DNA; Protein_Acetylation

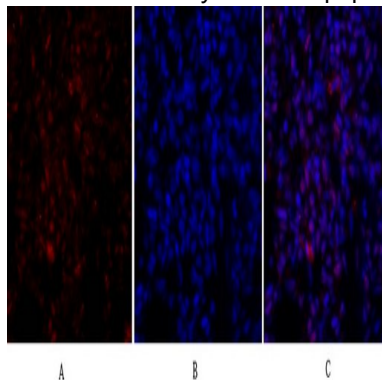
Image Data



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using Retinoblastoma Antibody. The picture on the right is blocked with the synthesized peptide.

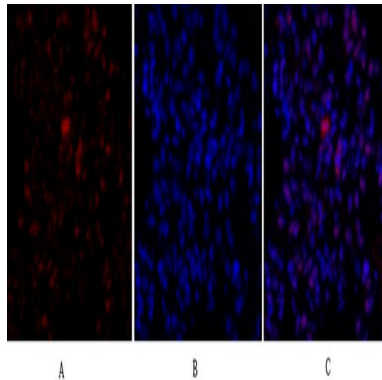


Western blot analysis of lysates from HepG2, Jurkat, and HUVEC cells, using Retinoblastoma Antibody. The lane on the right is blocked with the synthesized peptide.

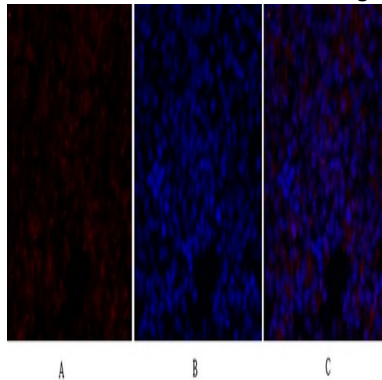


Immunofluorescence analysis of rat-lung tissue. 1, Rb Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

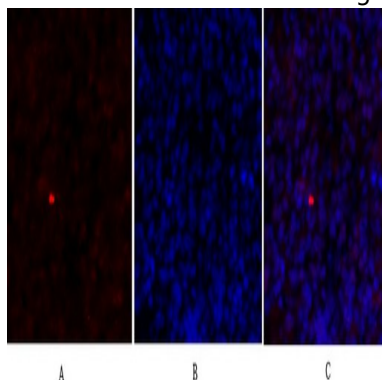
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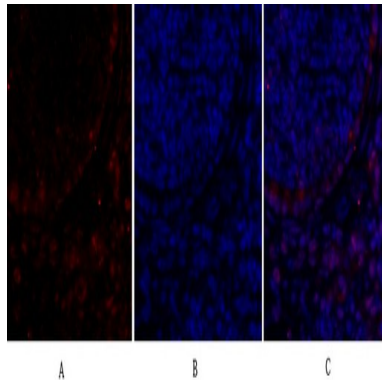
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Immunofluorescence analysis of rat-spleen tissue. 1,Rb Polyclonal Antibody (red) was diluted at 1:200 (4°C,overnight) . 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

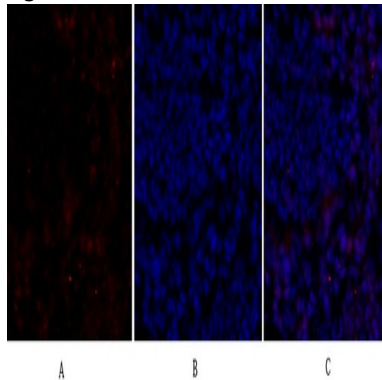


Immunofluorescence analysis of rat-spleen tissue. 1,Rb Polyclonal Antibody (red) was diluted at 1:200 (4°C,overnight) . 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



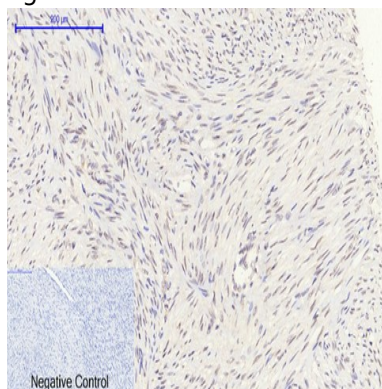
Immunofluorescence analysis of mouse-lung tissue. 1,Rb Polyclonal Antibody (red) was diluted at 1:200 (4°C,overnight) .
2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min.

Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of mouse-lung tissue. 1,Rb Polyclonal Antibody (red) was diluted at 1:200 (4°C,overnight) .
2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min.

Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Human-uterus-cancer tissue. 1,Rb Polyclonal Antibody was diluted at 1:200 (4°C,overnight) . 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C,20min) . 3,Secondary antibody was diluted at 1:200 (room temperature, 30min) . Negative control was used by secondary antibody only.

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Note

For research use only.