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RB1 Antibody (S608)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6265e

Product Information

Application	IF, IHC-P, WB, E
Primary Accession	P06400
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	106159
Antigen Region	586-615

Additional Information

Gene ID	5925
Other Names	Retinoblastoma-associated protein, p105-Rb, pRb, Rb, pp110, RB1
Target/Specificity	This RB1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 586-615 amino acids from human RB1.
Dilution	IF~~1:10~50 IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RB1 Antibody (S608) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RB1
Function	Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed:10499802). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes (PubMed:10499802). Both physically blocks E2Fs transactivating domain and recruits chromatin- modifying enzymes that actively repress transcription

	(PubMed:10499802). Cyclin and CDK-dependent phosphorylation of RB1 induces its dissociation from E2Fs, thereby activating transcription of E2F responsive genes and triggering entry into S phase (PubMed:10499802). RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C (PubMed:15084261). 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, KMT5B and KMT5C, leading to epigenetic transcriptional repression. Controls histone H4 'Lys-20' trimethylation. Inhibits the intrinsic kinase activity of TAF1. 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 (By similarity).
Cellular Location	Nucleus. Cytoplasm {ECO:0000250|UniProtKB:P13405}. Note=During keratinocyte differentiation, acetylation by KAT2B/PCAF is required for nuclear localization (PubMed:20940255). Localizes to the cytoplasm when hyperphosphorylated (By similarity). {ECO:0000250|UniProtKB:P13405, ECO:0000269|PubMed:20940255}
Tissue Location	Expressed in the retina. Expressed in foreskin keratinocytes (at protein level) (PubMed:20940255)

Background

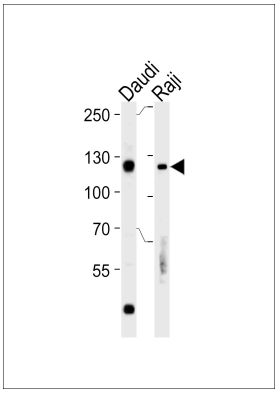
The retinoblastoma protein is a tumor suppressor protein that is dysfunctional in many types of cancer.[1] One highly studied function of pRb is to prevent excessive cell growth by inhibiting cell cycle progression until a cell is ready to divide. pRb belongs to the pocket protein family, whose members have a pocket for the functional binding of other proteins.[2][3] Should an oncogenic protein, such as those produced by cells infected by high-risk types of human papillomaviruses, bind and inactivate pRb, this can lead to cancer. Retinoblastoma (RB) is an embryonic malignant neoplasm of retinal origin. It almost always presents in early childhood and is often bilateral.

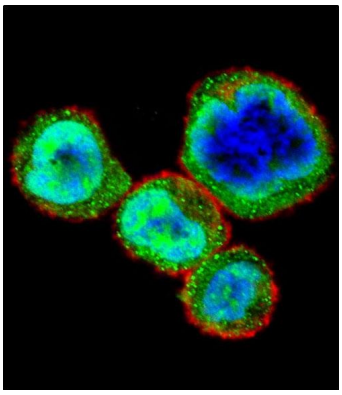
References

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Borah, S., et al., J. Virol. 78(19):10336-10347 (2004).
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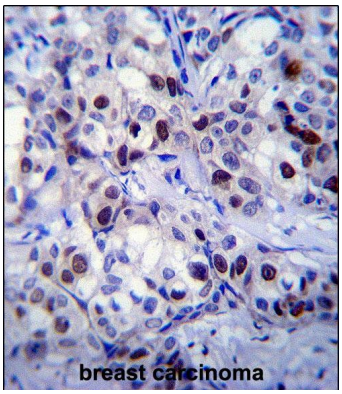
Images

Rb Antibody (S608) (Cat. #AP6265e) western blot analysis in Daudi,Raji cell line lysates (35ug/lane).This demonstrates the Rb antibody detected the Rb protein (arrow).





Confocal immunofluorescent analysis of RB1 Antibody (S608)(Cat#AP6265e) with MDA-MB435 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).



RB1 Antibody (S608) (Cat. #AP6265e)immunohistochemistry analysis in formalin fixed and paraffin embedded human breast carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of RB1 Antibody (S608) for immunohistochemistry. Clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.