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Retinoblastoma Antibody

Rabbit mAb
Catalog # AP90664

Product Information

Application	WB, IHC, IF, ICC, IP, IHF
Primary Accession	P06400
Reactivity	Human, Mouse
Clonality	Monoclonal
Other Names	OSRC; RB; p105-Rb; RB1; pRb; pp110;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	106159

Additional Information

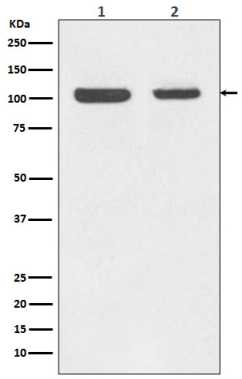
Dilution	WB 1:1000~1:2000 IHC 1:100~1:500 ICC/IF 1:100~1:500 IP 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Retinoblastoma
Description	The retinoblastoma tumor suppressor protein, Rb, regulates cell proliferation by controlling progression through the restriction point within the G1-phase of the cell cycle. Rb has three functionally distinct binding domains and interacts with critical regulatory proteins including the E2F family of transcription factors, c-Abl tyrosine kinase, and proteins with a conserved LXCXE motif. Cell cycle-dependent phosphorylation by a CDK inhibits Rb target binding and allows cell cycle progression.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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)

Images



Western blot analysis of Retinoblastoma expression in (1) Jurkat cell lysate; (2) MCF-7 cell lysate.

Image not found : 202311/AP90664-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human lung cancer, using Retinoblastoma Antibody.

Image not found : 202311/AP90664-IF.jpg

Immunofluorescent analysis of SH-SY5Y cells, using Retinoblastoma Antibody.