

Rb Rabbit mAb

Catalog # AP74948

Product Information

Application	WB, IHC-P, FC, IP
Primary Accession	P13405
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	105367

Additional Information

Gene ID	19645
Other Names	Rb1
Dilution	WB~~1:500-1:1000 IHC-P~~N/A FC~~1:50-1:100 IP~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	Rb1
Synonyms	Rb-1
Function	Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed:8336704). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes. Both physically blocks E2Fs transactivating domain and recruits chromatin-modifying enzymes that actively repress transcription. 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. RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C. Directly involved in heterochromatin formation by maintaining overall chromatin structure and, in particular, that of constitutive heterochromatin by stabilizing histone methylation (PubMed:15750587). Recruits and targets histone methyltransferases SUV39H1, KMT5B and KMT5C, leading to epigenetic transcriptional repression.

Controls histone H4 'Lys-20' trimethylation (PubMed:[16612004](#)). 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) (PubMed:[15750587](#), PubMed:[16612004](#), PubMed:[8336704](#)).

Cellular Location

Nucleus. Cytoplasm Note=During keratinocyte differentiation, acetylation by KAT2B/PCAF is required for nuclear localization (By similarity). Localizes to the cytoplasm when hyperphosphorylated (PubMed:36689330) {ECO:0000250|UniProtKB:P06400, ECO:0000269|PubMed:36689330}

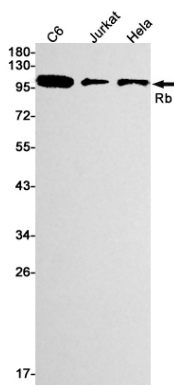
Tissue Location

Expressed in the cell nuclei of renal tubules, hepatocytes and skeletal muscles. Expressed in skin (at protein level) (PubMed:20940255).

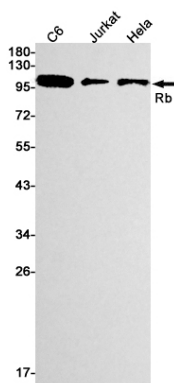
Background

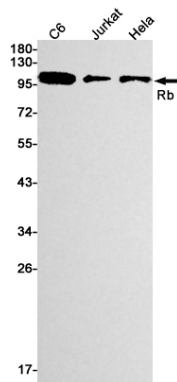
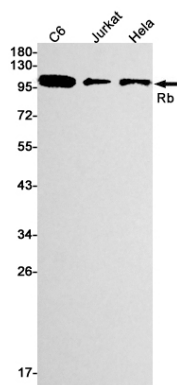
Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle.

Images



Western blot analysis of Rb in C6, Jurkat, HeLa lysates using Rb antibody.





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