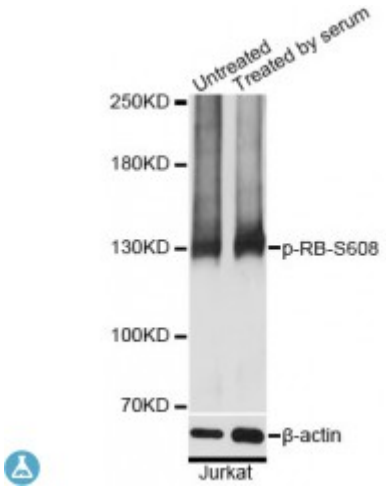
Anti-Phospho-RB1-(S608) Antibody



Description	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.

Model	STJ117879
Host	Rabbit
Reactivity	Human
Applications	WB
Immunogen	A phospho specific peptide corresponding to residues surrounding S608 of human RB1
Gene ID	5925
Gene Symbol	RB1
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Expressed in the retina
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Retinoblastoma-associated protein p105-Rb pRb Rb pp110
Molecular Weight	106.159 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:9884OMIM:109800Reactome:R-HSA-113501
Alternative Names	Retinoblastoma-associated protein p105-Rb pRb Rb pp110
Function	Key regulator of entry into cell division that acts as a tumor suppressor, Promotes G0-G1 transition when phosphorylated by CDK3/cyclin-C, 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, 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 , 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,
Cellular Localization	Nucleus
Post-translational Modifications	Phosphorylated by CDK6 and CDK4, and subsequently by CDK2 at Ser-567 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, Phosphorylation at Thr-821 and Thr-826 promotes interaction between the C-terminal domain C and the Pocket domain, and thereby inhibits interactions with heterodimeric E2F/DP transcription factor complexes, Dephosphorylated at Ser-795 by calcineruin upon calcium stimulation, CDK3/cyclin-C-mediated phosphorylation at Ser-807 and Ser-811 is required for G0-G1 transition, Phosphorylated by CDK1 and CDK2 upon TGFB1-mediated apoptosis ,