

Rb Gene Protein
Mouse Monoclonal Antibody (Mab)
Catalog # APA111

Specification

Rb Gene Protein - Product Information

Application	IHC
Primary Accession	P06400
Host	Mouse
Clonality	Monoclonal
Calculated MW	106159 Da

Rb Gene Protein - Additional Information

Gene ID	5925
Gene Name	RB1
Other Names	Retinoblastoma-associated protein, p105-Rb, p110-RB1, pRb, Rb, pp110, RB1

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	Rb Gene Protein is for research use only and not for use in diagnostic or therapeutic procedures.

Rb Gene Protein - 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

Cellular Location	(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). Nucleus. Note=During keratinocyte differentiation, acetylation by KAT2B/PCAF is required for nuclear localization.
Tissue Location	Expressed in the retina. Expressed in foreskin keratinocytes (at protein level) (PubMed:20940255)

Rb Gene Protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Rb Gene Protein - Images