10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RB1 / Retinoblastoma / RB Antibody (N-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS11785

Specification

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - Product Information

Application	**WB, IHC**
Primary Accession	P06400
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**106kDa KDa**

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - Additional Information

Gene ID 5925

Other Names
Retinoblastoma-associated protein, p105-Rb, pRb, Rb, pp110, RB1

Target/Specificity
Recognizes the N-terminal region of human and mouse Rb.

Reconstitution & Storage
+4°C or -20°C, Avoid repeated freezing and thawing.

Precautions
RB1 / Retinoblastoma / RB Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - 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. 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)

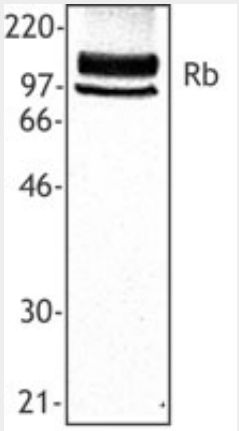
Volume
200 µl

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - Images



MOLT 4 extract was resolved by electrophoresis, transferred to nitrocellulose, and probed with...

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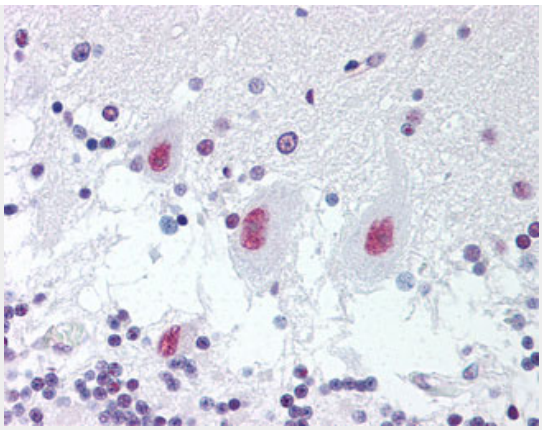
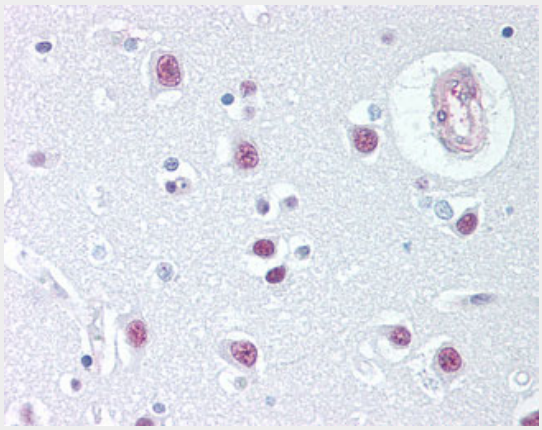


Anti-RB1 antibody IHC of human brain, cerebellum.



Anti-RB1 antibody IHC of human brain, cortex.

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - Background

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, SUV420H1 and SUV420H2, 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). 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.

RB1 / Retinoblastoma / RB Antibody (N-Terminus) - References

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Friend S.H.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:9059-9063(1987).
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