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Anti-Rb1 (Tumor Suppressor Protein) Antibody
Mouse Monoclonal Antibody
Catalog # AH13478

Specification

Anti-Rb1 (Tumor Suppressor Protein) Antibody - Product Information

Application	**,1,14,5,**
Primary Accession	P06400
Other Accession	408528
Reactivity	**Human, Mouse**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse / IgG1, kappa**
Calculated MW	**106159**

Anti-Rb1 (Tumor Suppressor Protein) Antibody - Additional Information

Gene ID 5925

Other Names
OSRC; Osteosarcoma; p105-Rb; PP105; pp110; pRb; Prepro retinoblastoma associated protein; RB1; Retinoblastoma 1; Retinoblastoma-associated protein

Format
200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

Storage
Store at 2 to 8°C.Antibody is stable for 24 months.

Precautions
Anti-Rb1 (Tumor Suppressor Protein) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-Rb1 (Tumor Suppressor Protein) Antibody - 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:<a

href="http://www.uniprot.org/citations/10499802" target="_blank">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}

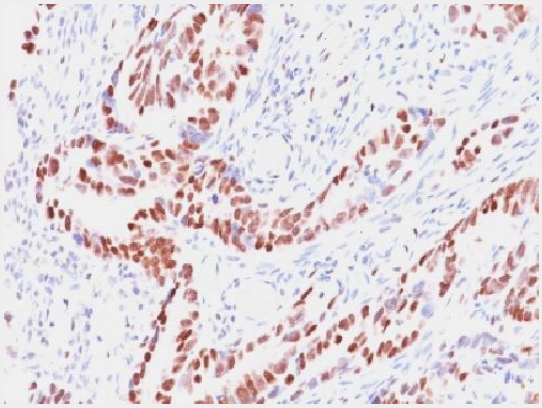
Tissue Location
Expressed in the retina. Expressed in foreskin keratinocytes (at protein level) (PubMed:20940255)

Anti-Rb1 (Tumor Suppressor Protein) Antibody - 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

Anti-Rb1 (Tumor Suppressor Protein) Antibody - Images



Formalin-fixed, paraffin-embedded human Colon stained with Retinoblastoma (Rb1) Monoclonal Antibody (SPM353).

Anti-Rb1 (Tumor Suppressor Protein) Antibody - Background

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Recognizes a 105kDa phosphoprotein, identified as retinoblastoma (Rb) gene product. Its epitope is localized between aa 703-772. It shows no cross reaction with p107 or p130. It specifically stains the nuclei of BT-20 cells and primary human foreskin fibroblast (HFF) cells. It does not stain the Rb-negative BT549 cells. It reacts with the hyperphosphorylated as well as the un (under) phosphorylated form of the Rb protein. Retinoblastoma gene product plays a key role in cell cycle control. It has been identified as a tumor suppressor gene whose loss of its function leads to tumor development. It is widely expressed in a variety of human tissues including breast, esophageal, squamous cell and cervical carcinoma.