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Anti-Rb1 (Tumor Suppressor Protein) Antibody

Mouse Monoclonal Antibody
Catalog # AH13478

Product Information

Application	WB, IHC-P, IP
Primary Accession	P06400
Other Accession	408528
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	SPM353
Calculated MW	106159

Additional Information

Gene ID	5925
Other Names	OSRC; Osteosarcoma; p105-Rb; PP105; pp110; pRb; Prepro retinoblastoma associated protein; RB1; Retinoblastoma 1; Retinoblastoma-associated protein
Application Note	Western Blotting (0.5-1ug/ml); Immunoprecipitation (0.5-1 □g/500ug protein lysate);,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
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.

Protein Information

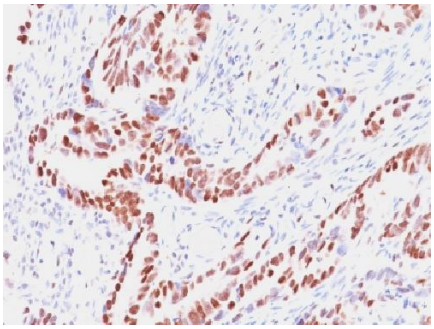
Name	RB1
Function	Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle (PubMed:10499802). The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes (PubMed:10499802). Both physically blocks E2Fs transactivating 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. 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)

Background

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.

Images



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.