

Rabbit RB1 Polyclonal Antibody | anti-RB1 antibody

RB1 Antibody

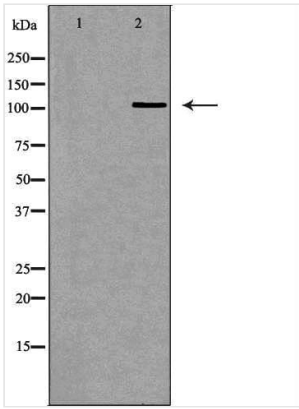
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326599	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

RB1; Polyclonal Antibody; RB1 Antibody; Exon 17 tumor GOS561 substitution mutation causes premature stop; GOS563 exon 17 substitution mutation causes premature stop; OSRC; Osteosarcoma; p105-Rb; P105RB; PP105; pp110; PPP1R130; pRb; Prepro retinoblastoma associated protein; Protein phosphatase 1 regulatory subunit 130; Rb; RB transcriptional corepressor 1; RB_HUMAN; RB1 gene; Retinoblastoma 1; Retinoblastoma susceptibility protein; Retinoblastoma-associated protein; anti-RB1 antibody

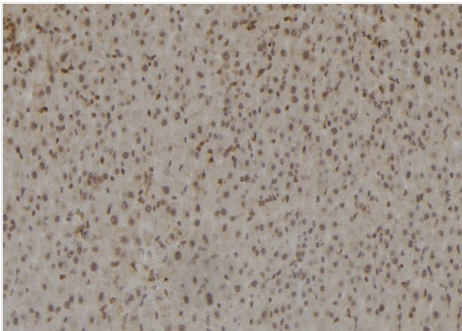
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	RB1 antibody detects endogenous levels of total RB1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	928
Applicable Applications for anti-RB1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide of human RB1
Subcellular Location	Nucleus.
Tissue Specificity	Expressed in the retina.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of extracts of A431, using RB1 antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326599 at 1/100 staining Rat liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)

AAA326599 staining MOLT cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-RB1 antibody	Description: The retinoblastoma tumor suppressor protein, Rb, regulates cell proliferation by controlling progression through the restriction point within the G1-phase of the cell cycle (1). Rb has three functionally distinct binding domains and interacts with critical regulatory proteins including the E2F family of transcription factors, c-Abl tyrosine kinase, and proteins with a conserved LXCXE motif (2-4). Cell cycle-dependent phosphorylation by a CDK inhibits Rb target binding and allows cell cycle progression (5). Rb inactivation and subsequent cell cycle progression likely requires an initial phosphorylation by cyclin D-CDK4/6 followed by cyclin E-CDK2 phosphorylation (6). Specificity of different CDK/cyclin complexes has been observed in vitro (6-8) and cyclin D1 is required for Ser780 phosphorylation in vivo (9). 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 (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. Subunit Structure: Interacts with ATAD5. Interacts with PRMT2, CDK1 and CDK2 (By similarity). The hypophosphorylated form interacts with and sequesters the E2F1 transcription factor. Interacts with heterodimeric E2F/DP transcription factor complexes containing TFDP1 and either E2F1, E2F3, E2F4 or E2F5, or TFDP2 and E2F4. The unphosphorylated form interacts with EID1, ARID3B, KDM5A, SUV39H1, MJD2A/JHDM3A and THOC1. Interacts with the N-terminal domain of TAF1. Interacts with SNW1, AATF, DNMT1, LIN9, LMNA, KMT5B, KMT5C, PELP1, UHRF2 and TMPO-alpha. May interact with NDC80. Interacts with GRIP1 and UBR4. Interacts with ARID4A and KDM5B. Interacts with E4F1 and LIMD1. Interacts with SMARCA4/BRG1 AND HDAC1 (By similarity). Interacts with PSMA3 and USP4. Interacts (when methylated at Lys-860) with L3MBTL1. Interacts with CHEK2; phosphorylates RB1. Interacts with CEBPA (PubMed:15107404). Interacts with adenovirus E1A protein, HPV E7 protein and SV40 large T antigen. Interacts with human cytomegalovirus/HHV-5 protein UL123. P-TEFB complex interacts with RB1; promotes phosphorylation of RB1 (PubMed:12037672). 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 calcineurin 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 (By similarity). N-terminus is methylated by METTL11A/NTM1 (By similarity). Monomethylation at Lys-810 by SMYD2 enhances phosphorylation at Ser-807 and Ser-811, and promotes cell cycle progression. Monomethylation at Lys-860 by SMYD2 promotes interaction with L3MBTL1. Acetylation at Lys-873 and Lys-874 regulates subcellular localization, at least during keratinocytes differentiation. Similarity: The Pocket domain binds to the threonine-phosphorylated domain C, thereby preventing interaction with heterodimeric E2F/DP transcription factor complexes. Belongs to the retinoblastoma protein (RB) family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	108773787
NCBI GeneID	5925
NCBI Accession #	NP_000312.2
NCBI GenBank Nucleotide #	NM_000321.2
UniProt Accession #	P06400; P78499; Q5VW46; Q8IZL4; A8K5E3
Molecular Weight	Observed: 110 kDa Predicted: 107 kDa
NCBI Official Full Name	retinoblastoma-associated protein

NCBI Official Synonym Full Names	RB transcriptional corepressor 1
NCBI Official Symbol	RB1
NCBI Official Synonym Symbols	RB; pRb; OSRC; pp110; p105-Rb; PPP1R130
NCBI Protein Information	retinoblastoma-associated protein
UniProt Protein Name	Retinoblastoma-associated protein
UniProt Gene Name	RB1
UniProt Synonym Gene Names	Rb

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/rb1-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326599>