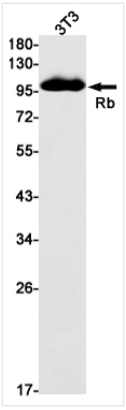
Rb Antibody – Rabbit Monoclonal

PRODUCT OVERVIEW

Product Name	Rb, Monoclonal Antibody
Full Product Name	Rb Rabbit mAb
Product Gene Name	anti-Rb antibody
Product Synonym Names	RB; pRb; OSRC; pp110; p105-Rb; PPP1R130
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Number	S03-4E9
Host	Recombinant Rabbit
Species Reactivity	Human
Form/Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Purity/Purification	Affinity Purified
Concentration	0.3mg/ml (lot specific)
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.
Molecular Weight	106,159 Da
Chromosome Location	Chromosome: 13; NC_000013.10 (48877883..49056026). Location: 13q14.2
OMIM	109800
3D Structure	ModBase 3D Structure for P06400
Immunogen	A synthetic peptide of human Rb
Conjugation	Unconjugated
Modification	Unmodification
Product Categories/Family for anti-Rb antibody	Primary Antibody
Applications Tested/Suitable for anti-Rb antibody	Western Blot (WB)
Application Notes for anti-Rb antibody	WB: 1/1000
Related Product Information for anti-Rb antibody	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 .

Other Notes	Small volumes of anti-Rb antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Rb purchase	MBS9467261 is an antibody targeting Rb. Also known as Rb Rabbit mAb. Reactive in Human. Host: Recombinant Rabbit.



Western Blot (WB) of anti-Rb antibody
Western blot detection of Rb in 3T3 cell lysates using Rb Rabbit mAb(1:1000 diluted).Predicted band size:106kDa.Observed band size:110kDa.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Rb. It may not necessarily be applicable to this product.

NCBI GI #	108773787
NCBI GeneID	5925
NCBI Accession #	NP_000312.2
UniProt Primary Accession #	P06400
UniProt Secondary Accession #	P78499; Q5VW46; Q8IZL4; A8K5E3
UniProt Related Accession #	P06400
GenBank Nucleotide #	NM_000321.2
NCBI Official Full Name	retinoblastoma-associated protein
NCBI Official Synonym Full Names	retinoblastoma 1
NCBI Official Symbol	RB1
NCBI Official Synonym Symbols	RB; pRb; OSRC; pp110; p105-Rb
UniProt Protein Name	Retinoblastoma-associated protein
UniProt Synonym Protein Names	p105-Rb; pRb; Rb; pp110
Protein Family	RB-associated KRAB zinc finger protein
UniProt Gene Name	RB1
UniProt Synonym Gene Names	Rb
UniProt Entry Name	RB_HUMAN
NCBI Protein Information	retinoblastoma-associated protein; retinoblastoma suspectibility protein

NCBI Summary for Rb	The protein encoded by this gene is a negative regulator of the cell cycle and was the first tumor suppressor gene found. The encoded protein also stabilizes constitutive heterochromatin to maintain the overall chromatin structure. The active, hypophosphorylated form of the protein binds transcription factor E2F1. Defects in this gene are a cause of childhood cancer retinoblastoma (RB), bladder cancer, and osteogenic sarcoma. [provided by RefSeq, Jul 2008]
UniProt Comments for Rb	Rb: retinoblastoma tumor suppressor protein regulates cell proliferation by controlling progression through the G1-phase restriction point. Has three distinct binding domains and interacts with regulatory proteins including the E2F family of transcription factors, c-Abl tyrosine kinase and proteins with a conserved LXCXE motif. Cell cycle-dependent phosphorylation by Cdks inhibits Rb target binding, thus allowing cell cycle progression. Recruits and targets histone methyltransferase suv39h1 leading to epigenetic transcriptional repression. Protein type: Transcription, coactivator/corepressor; Oncoprotein; Nuclear receptor co-regulator; Tumor suppressor Chromosomal Location of Human Ortholog: 13q14.2 Cellular Component: nucleoplasm; SWI/SNF complex; PML body; Rb-E2F complex; spindle; chromatin; nucleus Molecular Function: identical protein binding; protein binding; androgen receptor binding; DNA binding; ubiquitin protein ligase binding; transcription coactivator activity; phosphoprotein binding; kinase binding; transcription factor binding; transcription factor activity Biological Process: sister chromatid biorientation; viral reproduction; positive regulation of transcription, DNA-dependent; negative regulation of transcription from RNA polymerase II promoter, mitotic; regulation of mitotic cell cycle; neuron maturation; positive regulation of macrophage differentiation; cell cycle arrest; neurite development; negative regulation of epithelial cell proliferation; transcription, DNA-dependent; mitotic cell cycle checkpoint; negative regulation of transcription factor activity; regulation of lipid kinase activity; enucleate erythrocyte differentiation; G1/S-specific transcription in mitotic cell cycle; chromatin remodeling; myoblast differentiation; neuron apoptosis; maintenance of mitotic sister chromatid cohesion; gut development; cell division; neuron morphogenesis during differentiation; negative regulation of smoothened signaling pathway; androgen receptor signaling pathway; Ras protein signal transduction; positive regulation of mitotic metaphase/anaphase transition; negative regulation of protein kinase activity; striated muscle cell differentiation; positive regulation of transcription from RNA polymerase II promoter; mitotic cell cycle; negative regulation of transcription, DNA-dependent; cell cycle checkpoint; G1/S transition of mitotic cell cycle Disease: Bladder Cancer; Osteogenic Sarcoma; Small Cell Cancer Of The Lung; Retinoblastoma
Research Articles on Rb	**1.** Silencing of RB1 but not RB2/P130 decreases proliferative activity and impairs the differentiation potential of human mesenchymal stem cells.
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