

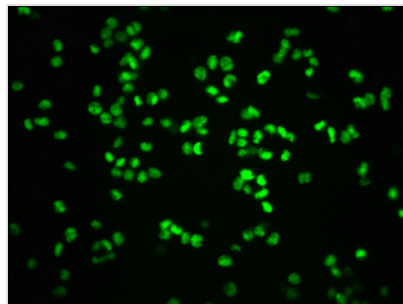


Phospho-RB1 (S807) Recombinant Monoclonal Antibody

Product Code	CSB-RA019386A807phHU
Abbreviation	Retinoblastoma-associated protein
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P06400
Immunogen	A synthesized peptide derived from Human Phospho-RB1 (S807)
Species Reactivity	Human
Tested Applications	ELISA, IF; Recommended dilution: IF:1:20-1:200
Relevance	<p>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.</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Retinoblastoma-associated protein, p105-Rb, pRb, Rb, pp110, RB1
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	RB1


Clone No.

1H3

Image


Immunofluorescence staining of K562 cells with CSB-RA019386A807phHU at 1:100, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

The DNA coding for the human monoclonal antibody against synthetic phosphopeptide of RB1 (S807) was integrated into the plasmid and then transfected into the cell line for in vitro expression. After purification from the tissue culture supernatant (TCS) through affinity-chromatography, the product recombinant monoclonal phospho-RB1 (S807) antibody was isolated. This phospho-RB1 Ser807 antibody detects endogenous RB1 protein only when phosphorylated at Serine 807. It is a rabbit IgG and is reactive with human samples. And it is suitable for ELISA and IF analyses.

RB1 gene is the first isolated tumor suppressor gene in human. It is a negative regulator of the cell cycle and regulates the expression of genes required for cell proliferation and differentiation by binding with transcription factor E2F1, thus maintaining the balance of cell growth and development. Therefore, the function of the RB1 gene is related to the cell cycle, cell senescence, cell apoptosis, cell differentiation, and growth inhibition. In general, Rb1 phosphorylation is required to release transcriptional target inhibition and promote cell cycle progression.