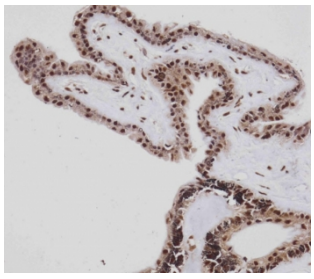
Retinoblastoma Antibody / Rb1 (F54327)

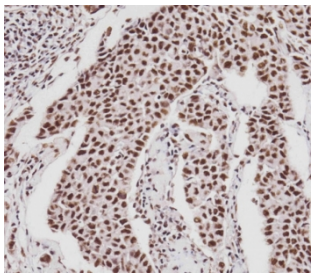
Catalog No.	Formulation	Size
F54327-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54327-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

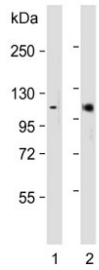
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P06400
Localization	Nuclear
Applications	Immunohistochemistry (FFPE) : 1:25 Western Blot : 1:500-1:2000
Limitations	This Retinoblastoma antibody is available for research use only.



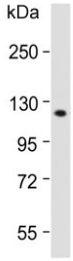
IHC testing of FFPE human retina with Retinoblastoma antibody. HIER: steam section in pH9 EDTA for 20 min and allow to cool prior to staining.



IHC testing of FFPE human breast cancer with Retinoblastoma antibody. HIER: steam section in pH9 EDTA for 20 min and allow to cool prior to staining.



Western blot testing of 1) mouse eyeball and 2) rat eyeball lysate with Retinoblastoma antibody. Predicted molecular weight ~110 kDa.



Western blot testing of human HeLa lysate with Retinoblastoma antibody. Predicted molecular weight ~110 kDa.

Description

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, SUV420H1 and SUV420H2, 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.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Retinoblastoma antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 600-620 from the human protein was used as the immunogen for the Retinoblastoma antibody.

Storage

Aliquot the Retinoblastoma antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.