abcam

Product datasheet

Anti-Rb antibody [1F8], prediluted ab17119

1 Image

Overview

Product name	Anti-Rb antibody [1F8], prediluted
Description	Mouse monoclonal [1F8] to Rb, prediluted
Host species	Mouse
Tested applications	**Suitable for:** IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length human Rb protein.
Positive control	Colon carcinoma

Properties

Form	Prediluted
Storage instructions	Shipped at 4°C. Store at +4°C.
Clonality	Monoclonal
Clone number	1F8
Isotype	IgG1
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab17119** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		

Application notes

IHC-P: This antibody has been pretitered and ready to use on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required.

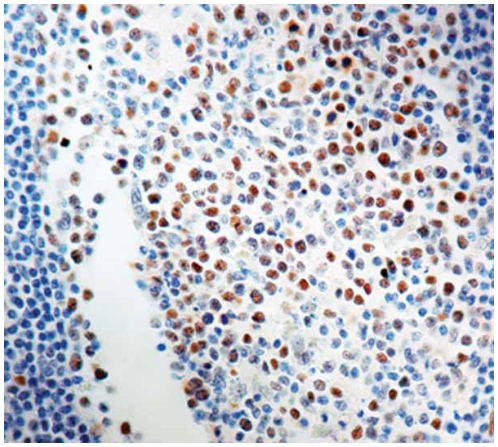
Formalin-fixed paraffin-embedded tissue sections require high temperature antigen unmasking with 1mM EDTA buffer, pH 8.0 prior to immunostaining.

Not tested in other applications.
Optimal dilutions/concentrations should be determined by the end user.

Target

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.
Tissue specificity	Expressed in the retina.
Involvement in disease	Childhood cancer retinoblastoma Bladder cancer Osteogenic sarcoma
Sequence similarities	Belongs to the retinoblastoma protein (RB) family.
Domain	The Pocket domain binds to the threonine-phosphorylated domain C, thereby preventing interaction with heterodimeric E2F/DP transcription factor complexes.
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 calcineruin 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. 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.
Cellular localization	Nucleus.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rb antibody [1F8], prediluted (ab17119)

Immunohistochemical analysis of formalin-fixed paraffin-embedded human tonsil tissue sections, labelling Retinoblastoma with ab17119.

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