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Phospho-Rb-like-1(S975) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3232A

Product Information

Application	WB, IHC-P, E
Primary Accession	P28749
Other Accession	Q64701
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB7537
Calculated MW	120847

Additional Information

Gene ID	5933
Other Names	Retinoblastoma-like protein 1, 107 kDa retinoblastoma-associated protein, p107, pRb1, RBL1
Target/Specificity	This Rb-like-1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S975 of human Rb-like-1.
Dilution	WB~~1:250 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-Rb-like-1(S975) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RBL1
Function	Key regulator of entry into cell division (PubMed: 17671431). Directly involved in heterochromatin formation by maintaining overall chromatin structure and, in particular, that of constitutive heterochromatin by stabilizing

histone methylation (By similarity). Recruits and targets histone methyltransferases KMT5B and KMT5C, leading to epigenetic transcriptional repression (By similarity). Controls histone H4 'Lys-20' trimethylation (By similarity). Probably acts as a transcription repressor by recruiting chromatin-modifying enzymes to promoters (By similarity). Potent inhibitor of E2F-mediated trans-activation (PubMed:8319904). May act as a tumor suppressor (PubMed:8319904).

Cellular Location Nucleus.

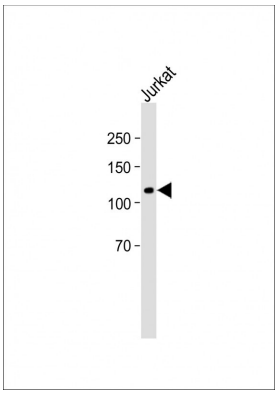
Background

RB-like 1 is similar in sequence and possibly function to the product of the retinoblastoma 1 (RB1) gene. The RB1 gene product is a tumor suppressor protein that appears to be involved in cell cycle regulation, as it is phosphorylated in the S to M phase transition and is dephosphorylated in the G1 phase of the cell cycle. Both the RB1 protein and RB-like 1 can form a complex with adenovirus E1A protein and SV40 large T-antigen, with the SV40 large T-antigen binding only to the unphosphorylated form of each protein. In addition, both proteins can inhibit the transcription of cell cycle genes containing E2F binding sites in their promoters. Due to the sequence and biochemical similarities with the RB1 protein, it is thought that RB-like 1 may also be a tumor suppressor.

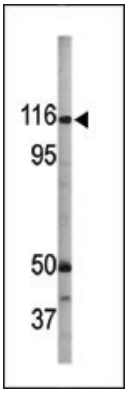
References

Rodier, G., et al., J. Cell Biol. 168(1):55-66 (2005).
Barbie, T.U., et al., Proc. Natl. Acad. Sci. U.S.A. 100(26):15601-15606 (2003).
Joaquin, M., et al., J. Biol. Chem. 278(45):44255-44264 (2003).
Cicchillitti, L., et al., J. Biol. Chem. 278(21):19509-19517 (2003).
Leng, X., et al., Mol. Cell. Biol. 22(7):2242-2254 (2002).

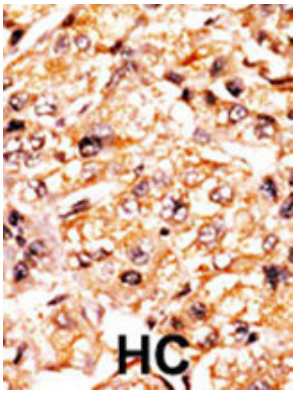
Images



All lanes: Anti-Rb-like-1(S975) Antibody at 1:2000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 121 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



The anti-Phospho-Rb-like-1-S975 Pab (Cat. #AP3232a) is used in Western blot to detect Phospho-Rb-like-1-S975 in A2058 tissue lysate



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.