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phospho-p107 (Ser975) Rabbit pAb

Catalog # AP99526

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P28749
Other Accession	P28749
Reactivity	Rat, Human, Mouse
Predicted	Pig, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	120847
Physical State	Liquid
Immunogen	KLH conjugated Synthesised phosphopeptide derived from human RBL1 around the phosphorylation site of Ser975
Epitope Specificity	PG(P-S)PR
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the retinoblastoma protein (RB) family.
SUBUNIT	Interacts with SUV420H1, SUV420H2 and USP4 (By similarity). Component of the DREAM complex (also named LINC complex) at least composed of E2F4, E2F5, LIN9, LIN37, LIN52, LIN54, MYBL1, MYBL2, RBL1, RBL2, RBBP4, TFDP1 and TFDP2. The complex exists in quiescent cells where it represses cell cycle-dependent genes. It dissociates in S phase when LIN9, LIN37, LIN52 and LIN54 form a subcomplex that binds to MYBL2. Interacts with AATF. Interacts with KDM5A. Interacts with SV40 and JC virus large T antigens.
Post-translational modifications	Exists in both phosphorylated and unphosphorylated forms, and T, but not E1A, binds only to the unphosphorylated form. Cell-cycle arrest properties are inactivated by phosphorylation on Thr-332, Ser-640, Ser-964 and Ser-975 by CDK4.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The pocket protein family consists of three structurally and functionally related proteins, Rb (retinoblastoma), p107, and p130. This family of tumor suppressors function to regulate important cellular transcription factors, such as the E2F family. The E2F proteins regulate the expression of genes whose products are important for cell cycle progression. The inactivation Rb is catalyzed by CDK phosphorylation thereby releasing E2F during the G1-S phase cellular progression. Unchecked inactivation of Rb in G1 phase has been indicated as a universal mechanism underlying cellular transformation . While Rb has been the most studied among the pocket proteins, p107 and p130 have also been shown to be key regulators of E2F. Several studies have also provided evidence that p107/p130 provide different functions in E2F regulation than does Rb. Rb, p107, and p130 each contain a conserved 'A/B pocket', which is the target of several viral oncoproteins, namely SV40 large T-antigen and adenovirus E1A. There are two isoforms.

Additional Information

Gene ID	5933
Other Names	CP107; PRB1; p107; RBL1_HUMAN; RBL1; 107 kDa retinoblastoma-associated protein (p107); RBL1_MOUSE; RB transcriptional corepressor like 1; retinoblastoma-like 1; RBL1 | p107 (phospho-S975); p-p107; phospho-p107; p-RBL1; RBL1 | p107 (phospho-Ser975)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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