

Anti-Phospho-RB1 (Ser780) Antibody (1X20)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	1X20
Purification:	Affinity-chromatography

Applications

Verified Activity:	<p>1. IHC image of TMAH-00956 diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.</p> <p>2. Immunofluorescence staining of K562 cells with TMAH-00956 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°C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).</p> <p>3. Immunoprecipitating Phospho-RB1 in Hela whole cell lysate Lane 1: Rabbit control IgG(1µg) instead of TMAH-00956 in Hela whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000) Lane 2: TMAH-00956(3µg)+ Hela whole cell lysate(1mg) Lane 3: Hela whole cell lysate (20µg)</p>
Application:	ELISA, IHC, IF, IP
Recommended	IHC:1:50-1:200; IF:1:20-1:200; IP:1:200-1:1000.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human Phospho-RB1 (S780)
Antigen Species:	Human
Gene ID:	5925
Uniprot ID:	P06400
Synonyms:	RB transcriptional corepressor 1;P105RB;p-RB1 (S780);PP105;RB1 (p-S780);Rb;p-RB1 (Ser780);PPP1R130;Retinoblastoma susceptibility protein;Osteosarcoma;Exon 17 tumor GOS561 substitution mutation causes premature stop;RB 1;Protein phosphatase 1 regulatory subunit 130;Phospho-RB1 (S780);p105-Rb;Retinoblastoma-associated protein;OSRC;Retinoblastoma 1;pp110;pRb;Prepro retinoblastoma associated protein;RB1 (p-Ser780)
Biology Area:	Cell Biology

Research Background

Tumor suppressor that is a key regulator of the G1/S transition of the cell cycle. The hypophosphorylated form binds transcription regulators of the E2F family, preventing transcription of E2F-responsive genes. Both physically blocks E2Fs transactivating domain and recruits chromatin-modifying enzymes that actively repress transcription. Cyclin and CDK-dependent phosphorylation of RB1 induces its dissociation from E2Fs, thereby activating transcription of E2F responsive genes and triggering entry into S phase. RB1 also promotes the G0-G1 transition upon phosphorylation and activation by CDK3/cyclin-C. 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. (Microbial infection) 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.

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