abcam

Product datasheet

Anti-Rb (phospho S249) antibody ab4788

★★★★★ 1 Abreviews 2 References 画像数 1

製品の概要

製品名	Anti-Rb (phospho S249) antibody
製品の詳細	Rabbit polyclonal to Rb (phospho S249)
由来種	Rabbit
アプリケーション	**適用あり:** WB
種交差性	**交差種:** Human **交差が予測される動物種:** Mouse, Rat, Chicken
免疫原	Synthetic peptide corresponding to Human Rb (phospho S249 + T252). Database link: **P06400**
ポジティブ・コントロール	Jurkat cells in high growth phase.
特記事項	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
バッファー	pH: 7.30 Preservative: 0.05% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.1% BSA
精製度	Immunogen affinity purified
特記事項（精製）	Purified from rabbit serum by sequential epitope-specific chromatography. The antibody has been negatively preadsorbed using a non-phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated Rb protein. The final product is generated by affinity chromatography using a Rb-derived peptide that is phosphorylated at serine 249 and threonine 252.
ポリ/モノ	ポリクローナル

アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab4788の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB		

追加情報

WB: 1/1000. Detects a band of approximately 120 kDa (predicted molecular weight: 106 kDa). Can be blocked with **Rb peptide - phospho S249 + T252 (phospho and non-phospho pair)**.

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

ターゲット情報

機能

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.

組織特異性

Expressed in the retina.

関連疾患

Childhood cancer retinoblastoma
Bladder cancer
Osteogenic sarcoma

配列類似性

Belongs to the retinoblastoma protein (RB) family.

ドメイン

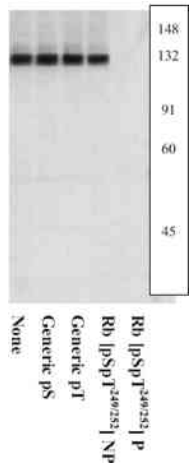
The Pocket domain binds to the threonine-phosphorylated domain C, thereby preventing interaction with heterodimeric E2F/DP transcription factor complexes.

翻訳後修飾

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.
細胞内局在	Nucleus.

画像



Western blot - Anti-Rb (phospho S249) antibody (ab4788)

Peptide Competition: Cell extracts prepared from Jurkat cells in high growth phase were resolved by SDS-PAGE on a 10% Tris-glycine gel and transferred to PVDF. Membranes were incubated with 0.50 µg/mL ab4788, following prior incubation in the absence of the phosphopeptide immunogen (1), a generic phosphoserine containing peptide (2), a generic phosphothreonine containing peptide (3), the non-phosphopeptide corresponding to the phosphopeptide immunogen (4), or the presence of the phosphopeptide immunogen (5). After washing, membranes were incubated with goat F(ab')2 anti-rabbit IgG alkaline phosphatase and bands were detected using the Tropix WesternStar detection method. The data show that only the phosphopeptide corresponding to this site blocks the antibody signal, therefore demonstrating the specificity of the ab4788 antibody for this epitope. Peptide Competition: Cell extracts prepared from Jurkat cells in high growth phase were resolved by SDS-PAGE on a 1

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