

Anti-Cdk4 antibody [EPR4513-54-3] ab108355

KO 評価済 リコンビナント RabMAb

★★★★★ 1 Abreviews 4 References 画像数 6

製品の概要

製品名	Anti-Cdk4 antibody [EPR4513-54-3]
製品の詳細	Rabbit monoclonal [EPR4513-54-3] to Cdk4
由来種	Rabbit
アプリケーション	適用あり: WB, ICC/IF 適用なし: IHC-P
種交差性	交差種: Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: HeLa, MCF7 and K562 cell lysates. ICC/IF: Wild-type HAP1 and HeLa cells.
特記事項	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
バッファー	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA, 59% PBS
精製度	Protein A purified
ポリ/モノ	モノクローナル

アイソタイプ	IgG
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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ab108355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確認ください。

追加情報 Is unsuitable for IHC-P.

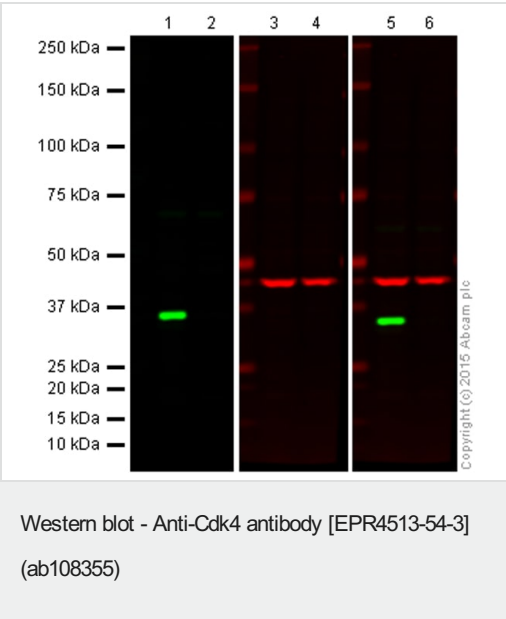
機能 Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals. Also phosphorylates SMAD3 in a cell-cycle-dependent manner and represses its transcriptional activity. Component of the ternary complex, cyclin D/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex.

関連疾患 Defects in CDK4 are a cause of susceptibility to cutaneous malignant melanoma type 3 (CMM3) [MIM:609048]. Malignant melanoma is a malignant neoplasm of melanocytes, arising de novo or from a pre-existing benign nevus, which occurs most often in the skin but also may involve other sites.

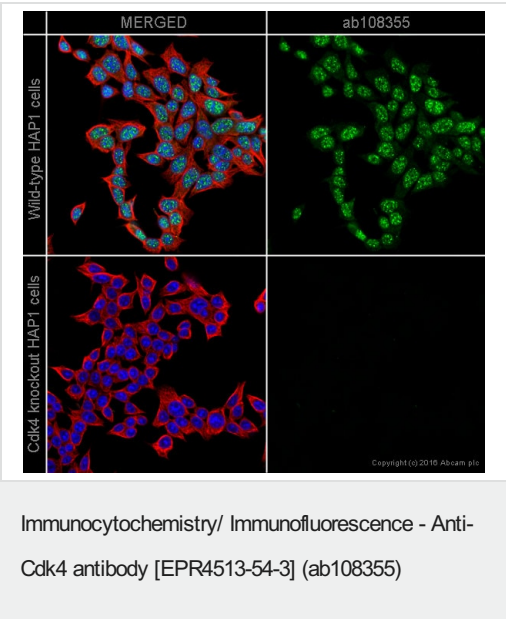
配列類似性	<p>Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily.</p> <p>Contains 1 protein kinase domain.</p>
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翻訳後修飾 Phosphorylation at Thr-172 is required for enzymatic activity. Phosphorylated, in vitro, at this site by CCNH-CDK7, but, in vivo, appears to be phosphorylated by a proline-directed kinase. In the cyclin D-CDK4-CDKN1B complex, this phosphorylation and consequent CDK4 enzyme activity, is dependent on the tyrosine phosphorylation state of CDKN1B. Thus, in proliferating cells, CDK4 within the complex is phosphorylated on Thr-172 in the T-loop. In resting cells, phosphorylation on Thr-172 is prevented by the non-tyrosine-phosphorylated form of CDKN1B.

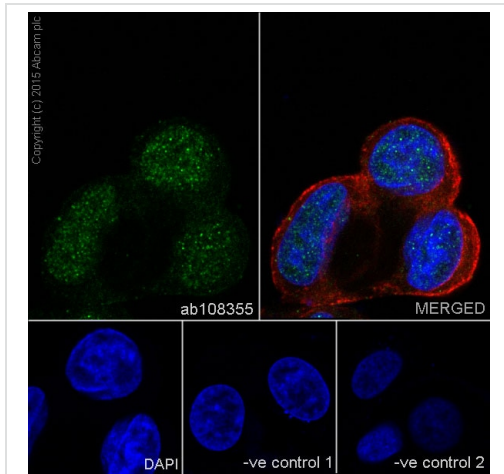
細胞内局在 Cytoplasm. Nucleus. Membrane. Cytoplasmic when non-complexed. Forms a cyclin D-CDK4 complex in the cytoplasm as cells progress through G(1) phase. The complex accumulates on the nuclear membrane and enters the nucleus on transition from G(1) to S phase. Also present in nucleoli and heterochromatin lumps. Colocalizes with RB1 after release into the nucleus.



Lanes 1, 3 and 5: Wild-type HAP1 cell lysate (20 µg)
Lanes 2, 4 and 6: CDK4 knockout HAP1 cell lysate (20 µg)
Lanes 1 and 2: Green signal from target - ab108355 observed at 34 kDa
Lanes 3 and 4: Red signal from loading control - [ab8226](#) observed at 42 kDa
Lanes 5 and 6: Merged (red and green) signal
ab108355 was shown to specifically react with CDK4 when CDK4 knockout samples were used. Wild-type and CDK4 knockout samples were subjected to SDS-PAGE. ab108355 and [ab8226](#) (loading control to beta actin) were both diluted at 1/1000 and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.

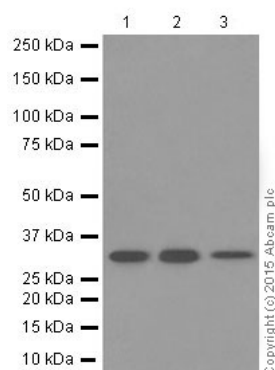


ab108355 staining Cdk4 in wild-type HAP1 cells (top panel) and Cdk4 knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab108355 at 1/400 dilution and [ab7291](#) at 1 µg/ml concentration overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to Rabbit IgG (Alexa Fluor® 488) ([ab150081](#)) at 2 µg/ml (shown in green) and a goat secondary antibody to Mouse IgG (Alexa Fluor® 594) ([ab150120](#)) (shown in pseudo colour red). Nuclear DNA was labelled in blue with DAPI.



Immunocytochemistry/ Immunofluorescence - Anti-Cdk4 antibody [EPR4513-54-3] (ab108355)

Immunofluorescence staining of MCF7 cells with purified ab108355 at a working dilution of 1/100, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit ([ab150077](#)), used at a dilution of 1/1000. [ab7291](#), a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with [ab150120](#) (Alexa Fluor® 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab108355 was used at a dilution of 1/500 followed by an Alexa Fluor® 594 goat anti-mouse antibody ([ab150120](#)) at a dilution of 1/500. For negative control 2, [ab7291](#) (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor® 488 goat anti-rabbit antibody ([ab150077](#)) at a dilution of 1/400.



Western blot - Anti-Cdk4 antibody [EPR4513-54-3] (ab108355)

All lanes : Anti-Cdk4 antibody [EPR4513-54-3] (ab108355) at 1/5000 dilution (purified)

Lane 1 : HeLa cell lysate

Lane 2 : K562 cell lysate

Lane 3 : Ramos cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

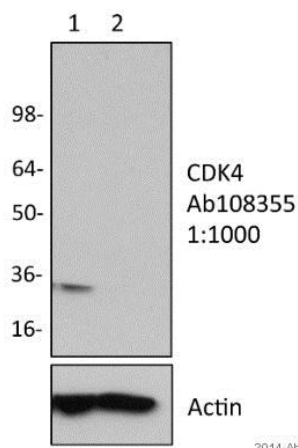
All lanes : HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 34 kDa

Observed band size: 34 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



Western blot - Anti-Cdk4 antibody [EPR4513-54-3] (ab108355)

This image is courtesy of an Abreview submitted by Sonia Rocha

All lanes : Anti-Cdk4 antibody [EPR4513-54-3] (ab108355) at 1/1000 dilution (unpurified)

Lane 1 : Human osteosarcoma cells - control, non-targeting siRNA

Lane 2 : Human osteosarcoma cells - siRNA for CDK4

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : HRP-conjugated goat anti-rabbit IgG polyclonal at 1/2000 dilution

Developed using the ECL technique.

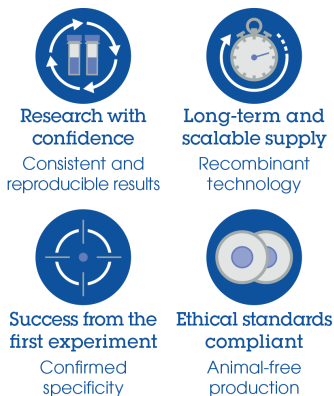
Performed under reducing conditions.

Predicted band size: 34 kDa

Observed band size: 34 kDa

Exposure time: 5 seconds

Why choose a recombinant antibody?



Anti-Cdk4 antibody [EPR4513-54-3] (ab108355)

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