

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






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#### 概述

产品名称	Anti-Cdk4抗体[EPR4513-54-3]
描述	兔单克隆抗体[EPR4513-54-3] to Cdk4
宿主	Rabbit
经测试应用	<b>适用于:</b> WB, ICC/IF <b>不适用于:</b> IHC-P
种属反应性	<b>与反应:</b> Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HeLa, MCF7 and K562 cell lysates. ICC/IF: Wild-type HAP1 and HeLa cells.
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</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>

#### 性能

形式	Liquid
存放说明	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.
存储溶液	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA, 59% PBS
纯度	Protein A purified
克隆	单克隆

克隆编号EPR4513-54-3

同种型IgG

应用

The Abpromise guarantee      **Abpromise™**承诺保证使用ab108355于以下的经测试应用

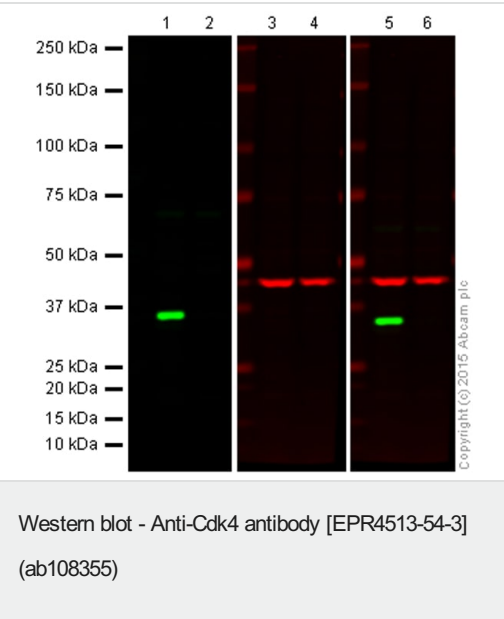
“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB	★★★★★ (1)	1/1000 - 1/10000. Detects a band of approximately 34 kDa (predicted molecular weight: 34 kDa).
ICC/IF		1/400. This product gave a positive signal in HAP1 cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min)

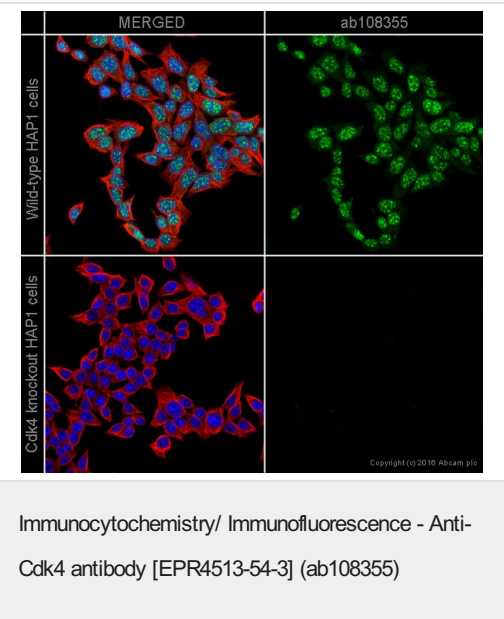
应用说明      Is unsuitable for IHC-P.

靶标

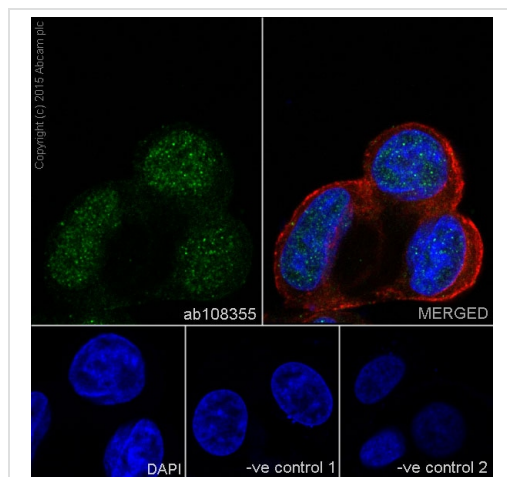
功能	Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes 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.
疾病相关	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.
序列相似性	Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily. Contains 1 protein kinase domain.
翻译后修饰	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.
细胞定位	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.

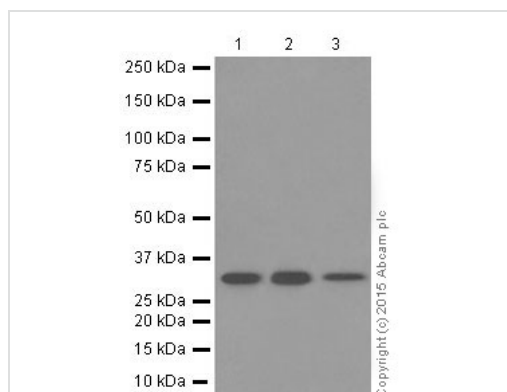


ab108355 staining Cdk4 in wild-type HAP1 cells (top panel) and Cdk4 knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab108355 at 1/400 dilution and [ab7291](#) at 1µg/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

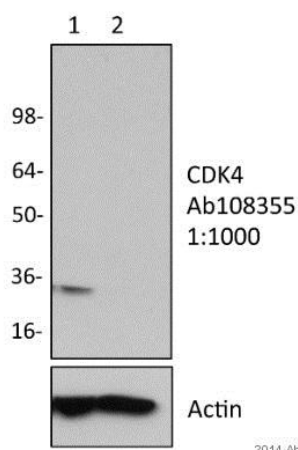
**All lanes :** HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

**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?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

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

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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