abcam

Product datasheet

Anti-PLK1 antibody [35-206] ab17056

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概述

产品名称	Anti-PLK1抗体[35-206]
描述	**小鼠单克隆抗体**[35-206] to PLK1
宿主	Mouse
经测试应用	**适用于:** Flow Cyt (Intra), ICC, WB
种属反应性	**与反应:** Human **预测可用于:** Rat
免疫原	Recombinant full length protein corresponding to Human PLK1.
表位	aa330-370.
阳性对照	WB: A431, U-2 OS and HeLa S3 lysates. Flow Cyt (Intra): HCT 116 cells. ICC/IF: HeLa cells.
常规说明	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. 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

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 or -80°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
纯度	Protein G purified
克隆	单克隆
克隆编号	35-206

同种型 IgG2b

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab17056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
Flow Cyt (Intra)		Use 1µg for 10^6 cells. **ab170192** - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
ICC		Use at an assay dependent concentration.
WB	★★★★★ (3)	Use a concentration of 1 µg/ml. Detects a band of approximately 66 kDa (predicted molecular weight: 67 kDa). This clone is superior to clone 36-298 (**ab17057**) in Western blotting and IP, but suffers from high background in IF and ICC.

靶标

功能 Serine/threonine-protein kinase that performs several important functions throughout M phase of the cell cycle, including the regulation of centrosome maturation and spindle assembly, the removal of cohesins from chromosome arms, the inactivation of APC/C inhibitors, and the regulation of mitotic exit and cytokinesis. Required for recovery after DNA damage checkpoint and entry into mitosis. Required for kinetochore localization of BUB1B. Phosphorylates SGOL1. Required for spindle pole localization of isoform 3 of SGOL1 and plays a role in regulating its centriole cohesion function. Phosphorylates BORA, and thereby promotes the degradation of BORA. Contributes to the regulation of AURKA function. Regulates TP53 stability through phosphorylation of TOPORS.

组织特异性 Placenta and colon.

序列相似性 Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. CDC5/Polo subfamily.
Contains 2 POLO box domains.
Contains 1 protein kinase domain.

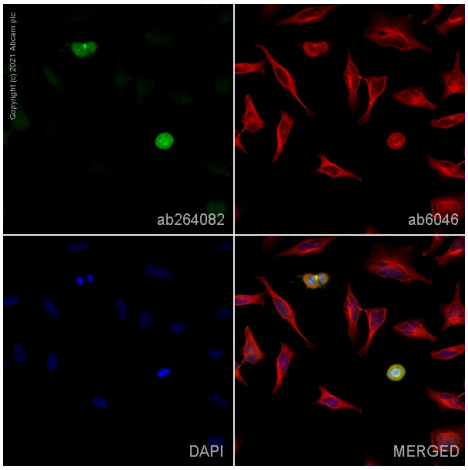
发展阶段 Accumulates to a maximum during the G2 and M phases, declines to a nearly undetectable level following mitosis and throughout G1 phase, and then begins to accumulate again during S phase.

翻译后修饰 Catalytic activity is enhanced by phosphorylation of Thr-210. Phosphorylation at Thr-210 is first detected on centrosomes in the G2 phase of the cell cycle, peaks in prometaphase and gradually disappears from centrosomes during anaphase.
Autophosphorylation and phosphorylation of Ser-137 may not be significant for the activation of PLK1 during mitosis, but may enhance catalytic activity during recovery after DNA damage checkpoint.
Ubiquitinated by the anaphase promoting complex/cyclosome (APC/C) in anaphase and following DNA damage, leading to its degradation by the proteasome. Ubiquitination is mediated via its interaction with FZR1/CDH1. Ubiquitination and subsequent degradation prevents entry into mitosis and is essential to maintain an efficient G2 DNA damage checkpoint.

细胞定位 Nucleus. Chromosome > centromere > kinetochore. Cytoplasm > cytoskeleton > centrosome.

During early stages of mitosis, the phosphorylated form is detected on centrosomes and kinetochores. Localizes to the outer kinetochore. Presence of SGOL1 and interaction with the phosphorylated form of BUB1 is required for the kinetochore localization.

图片



Immunocytochemistry - Anti-PLK1 antibody [35-206] (ab17056)

ab264082 staining PLK1 in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-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 overnight at 4°C with **ab264082** at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

Western blot - Anti-PLK1 antibody [35-206] (ab17056)

Anti-PLK1 antibody [35-206] (ab17056) at 1 µg/ml + A431 cell lysate at 20 µg

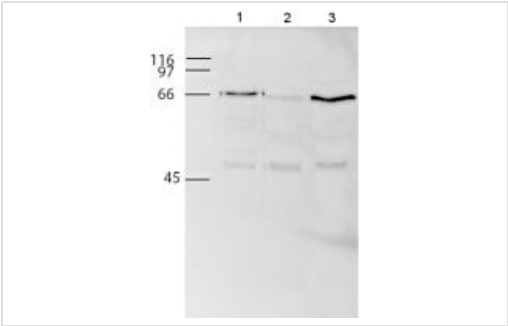
Secondary

Rabbit-anti mouse Alexa fluor(680) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 67 kDa
Observed band size: 66 kDa



Western blot - Anti-PLK1 antibody [35-206] (ab17056)

All lanes : Anti-PLK1 antibody [35-206] (ab17056)

Lane 1 : Recombinant PLK1
Lane 2 : U2OS lysate
Lane 3 : HeLaS3

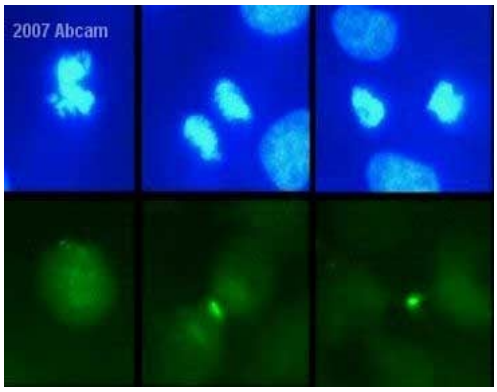
Performed under reducing conditions.

Predicted band size: 67 kDa
Observed band size: 66 kDa

Western blot using ab17056.

Lane 1: recombinant PLK1
Lane 2: U2OS lysate
Lane 3: HeLaS3 lysate

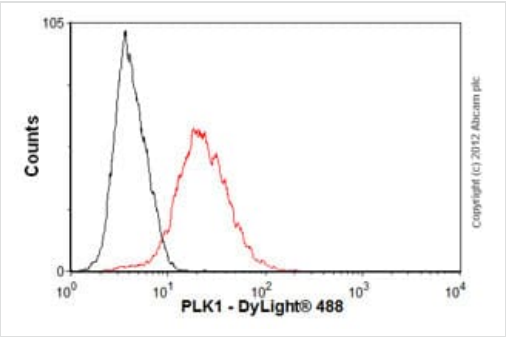
15% SDS-PAGE gel



Immunocytochemistry - Anti-PLK1 antibody [35-206] (ab17056)

This image is courtesy of an Abreview submitted by Melanie Adler

ab17056 at 1/100 staining human kidney tubular epithelial cells by ICC/IF. The cells were formaldehyde fixed, permeabilized with Triton X-100 and blocked with goat serum before incuabtion with the antibody. A goat anti-mouse FITC antibody was used as the secondary.



Flow Cytometry (Intracellular) - Anti-PLK1 antibody [35-206] (ab17056)

Overlay histogram showing HCT116 cells stained with ab17056 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab17056, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (**ab91366**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HCT116 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.