

## Product datasheet

# Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker ab109028

敲除验证
重组
RabMAb

★★★★★
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### 概述

<b>产品名称</b>	Anti-HP1 alpha抗体[EPR5777] - Heterochromatin marker
<b>描述</b>	兔单克隆抗体[EPR5777] to HP1 alpha - Heterochromatin marker
<b>宿主</b>	Rabbit
<b>经测试应用</b>	<b>适用于:</b> WB, IP, IHC-P, Flow Cyt, ICC/IF
<b>种属反应性</b>	<b>与反应:</b> Mouse, Rat, Human
<b>免疫原</b>	Synthetic peptide within Human HP1 alpha aa 150-250. The exact sequence is proprietary.
<b>阳性对照</b>	WB: HeLa, SH-SY5Y, MCF7, and A431 cell lysates, IHC-P: Human tonsil tissue. ICC/IF: HeLa, MCF7 and wild-type HAP1 cells.
<b>常规说明</b>	<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><b>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</b></p> <p>This product is a recombinant rabbit monoclonal antibody.</p>

### 性能

<b>形式</b>	Liquid
<b>存放说明</b>	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.
<b>存储溶液</b>	<p>pH: 7.20</p> <p>Preservative: 0.05% Sodium azide</p> <p>Constituents: 0.1% BSA, 40% Glycerol, 9.85% Tris glycine, 50% Tissue culture supernatant</p>
<b>纯度</b>	Tissue culture supernatant
<b>克隆</b>	单克隆
<b>克隆编号</b>	EPR5777

## 同种型

IgG

## 应用

Our [Abpromise guarantee](#) covers the use of **ab109028** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
WB	★★★★★	1/10000 - 1/50000. Detects a band of approximately 22 kDa (predicted molecular weight: 22 kDa).
IP		1/10 - 1/100.
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
Flow Cyt		1/10 - 1/100. <a href="#">ab172730</a> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★★	1/250.

## 靶标

### 功能

Component of heterochromatin that recognizes and binds histone H3 tails methylated at 'Lys-9' (H3K9me), leading to epigenetic repression. In contrast, it is excluded from chromatin when 'Tyr-41' of histone H3 is phosphorylated (H3Y41ph). Can interact with lamin-B receptor (LBR). This interaction can contribute to the association of the heterochromatin with the inner nuclear membrane. Involved in the formation of functional kinetochore through interaction with MIS12 complex proteins.

### 序列相似性

Contains 2 chromo domains.

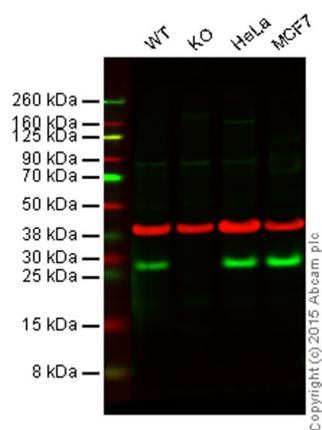
### 翻译后修饰

Phosphorylation of HP1 and LBR may be responsible for some of the alterations in chromatin organization and nuclear structure which occur at various times during the cell cycle (By similarity). Phosphorylated during interphase and possibly hyper-phosphorylated during mitosis. Ubiquitinated.

### 细胞定位

Nucleus. Chromosome. Chromosome > centromere. Component of centromeric and pericentromeric heterochromatin. Associates with chromosomes during mitosis. Associates specifically with chromatin during metaphase and anaphase.

## 图片



Western blot - Anti-HP1 alpha antibody [EPR5777] -  
Heterochromatin marker (ab109028)

**Lane 1:** Wild-type HAP1 cell lysate (20 µg)

**Lane 2:** HP1 alpha knockout HAP1 cell lysate (20 µg)

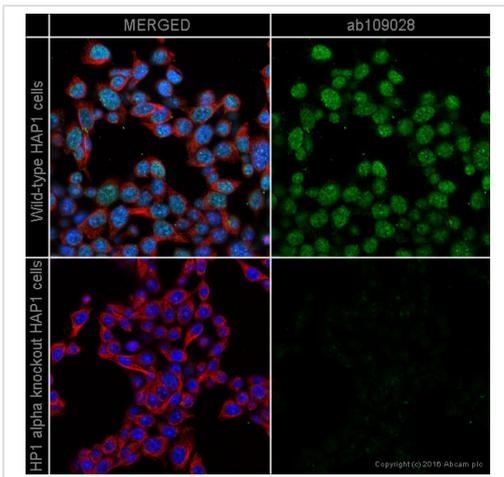
**Lane 3:** HeLa cell lysate (20 µg)

**Lane 4:** MCF7 cell lysate (20 µg)

**Lanes 1 - 4:** Merged signal (red and green).

Green - ab109028 observed at 28 kDa. Red - loading control, ab8245, observed at 37 kDa.

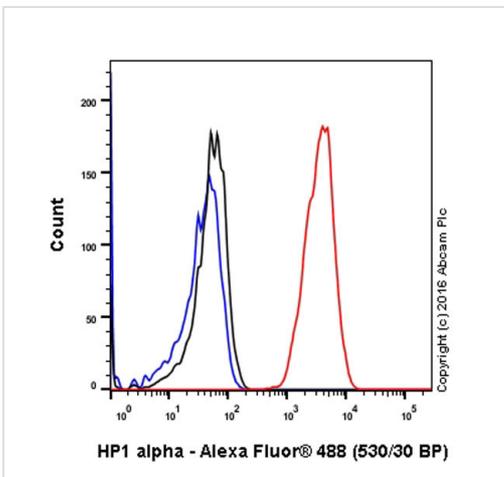
ab109028 was shown to specifically react with HP1 alpha when HP1 alpha knockout samples were used. Wild-type and HP1 alpha knockout samples were subjected to SDS-PAGE. ab109028 and ab8245 (loading control to GAPDH) were diluted 1/10 000 and 1/2000 respectively and incubated overnight at 4°C. Blots were 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 1/10000 dilution for 1 h at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028)

ab109028 staining HP1 alpha in wild-type HAP1 cells (top panel) and HP1 alpha knockout HAP1 cells (bottom panel). The cells were fixed with 4% formaldehyde (10min), 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 ab109028 at 1/250 dilution and ab195889 at 1/250 dilution (shown in pseudo colour red) 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). Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

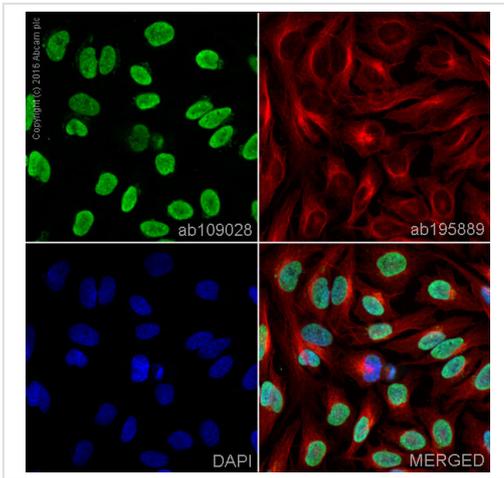


Flow Cytometry - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028)

ab109028 staining HP1 alpha in the human cell line MCF-7(human breast carcinoma) by flow cytometry. Cells were fixed with 4% paraformaldehyde, permeabilized with 90% methanol and the sample was incubated with the primary antibody at a dilution of 1/20. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.

Isoytype control: Rabbit monoclonal IgG (Black)

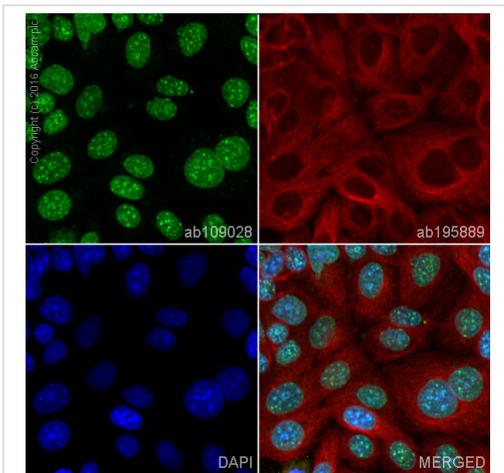
Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)



Immunocytochemistry/ Immunofluorescence - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028)

ab109028 staining HP1 alpha in HeLa cells. The cells were fixed with 4% formaldehyde (10min), 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 ab109028 at 1/250 dilution and ab195889 at 1/250 dilution (shown in pseudo colour red) 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). Nuclear DNA was labelled in blue with DAPI.

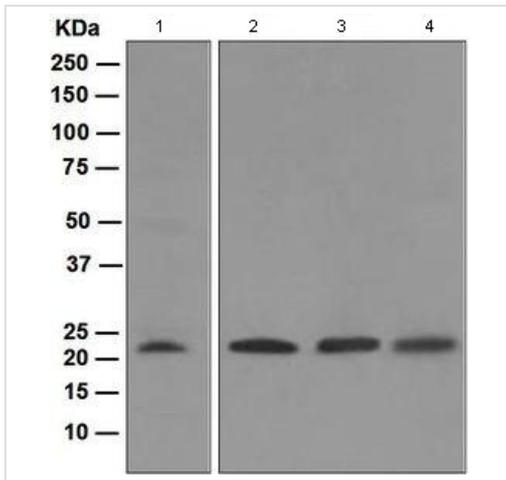
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunocytochemistry/ Immunofluorescence - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028)

ab109028 staining HP1 alpha in MCF7 cells. 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 ab109028 at 1/250 dilution and ab195889 at 1/250 dilution (shown in pseudo colour red) 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). Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Western blot - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028)

**All lanes :** Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028) at 1/10000 dilution

**Lane 1 :** HeLa cell lysate

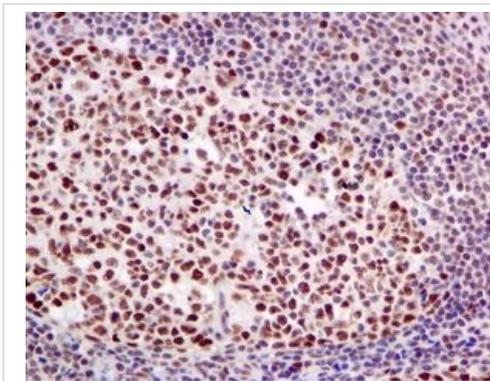
**Lane 2 :** SH-SY5Y cell lysate

**Lane 3 :** MCF7 cell lysate

**Lane 4 :** A431 cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 22 kDa



Immunohistochemical analysis of paraffin-embedded Human tonsil tissue using ab109028 at a dilution of 1/250.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker (ab109028)

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