

### Anti-HDAC9 antibody [EPR5223] ab109446






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#### 概述

产品名称	Anti-HDAC9抗体[EPR5223]
描述	兔单克隆抗体[EPR5223] to HDAC9
宿主	Rabbit
经测试应用	<b>适用于:</b> Flow Cyt (Intra), IP, WB, IHC-P, ICC/IF
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: HepG2, Raji, K-562, and HAP1 whole cell lysate. IHC-P: Human cerebrum tissue. ICC/IF: K-562 cells. Flow Cyt (Intra): K-562 cells. IP: K-562 whole cell lysate.
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>

#### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
存储溶液	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), 59% PBS</p>
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR5223
同种型	IgG

## 应用

### The Abpromise guarantee

**Abpromise™** 承诺保证使用ab109446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)		1/100.
IP		1/30.
WB		1/10000. Detects a band of approximately 160 kDa (predicted molecular weight: 111 kDa).
IHC-P		1/1000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF	★★★★★ (1)	1/100 - 1/250.

## 靶标

### 功能

Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Represses MEF2-dependent transcription. Isoform 3 lacks active site residues and therefore is catalytically inactive. Represses MEF2-dependent transcription by recruiting HDAC1 and/or HDAC3. Seems to inhibit skeletal myogenesis and to be involved in heart development. Protects neurons from apoptosis, both by inhibiting JUN phosphorylation by MAPK10 and by repressing JUN transcription via HDAC1 recruitment to JUN promoter.

### 组织特异性

Broadly expressed, with highest levels in brain, heart, muscle and testis. Isoform 3 is present in human bladder carcinoma cells (at protein level).

### 疾病相关

Note=A chromosomal aberration involving HDAC9 is found in a family with Peters anomaly. Translocation t(1;7)(q41;p21) with TGFB2 resulting in lack of HDAC9 protein.

### 序列相似性

Belongs to the histone deacetylase family. HD type 2 subfamily.

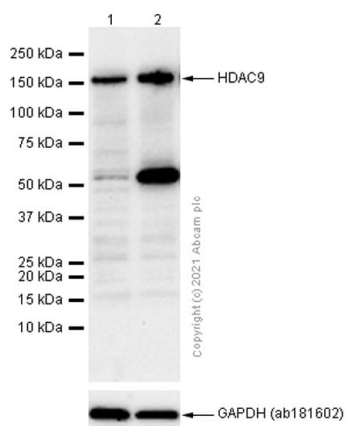
### 翻译后修饰

Phosphorylated on Ser-220 and Ser-450; which promotes 14-3-3-binding, impairs interaction with MEF2, and antagonizes antimyogenic activity. Phosphorylated on Ser-240; which impairs nuclear accumulation (By similarity). Isoform 7 is phosphorylated on Tyr-1010. Phosphorylated by the PKC kinases PKN1 and PKN2, impairing nuclear import. Sumoylated.

### 细胞定位

Nucleus.

## 图片



Western blot - Anti-HDAC9 antibody [EPR5223] (ab109446)

**All lanes :** Anti-HDAC9 antibody [EPR5223] (ab109446) at 1/1000 dilution (Purified)

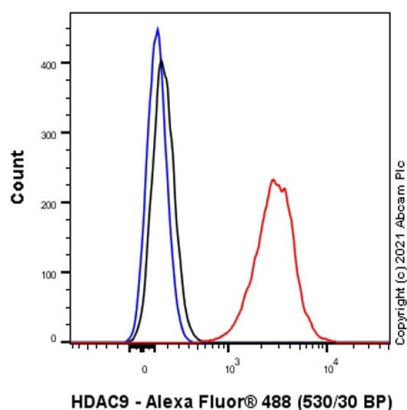
**Lane 1 :** Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate

**Lane 2 :** K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate

### Secondary

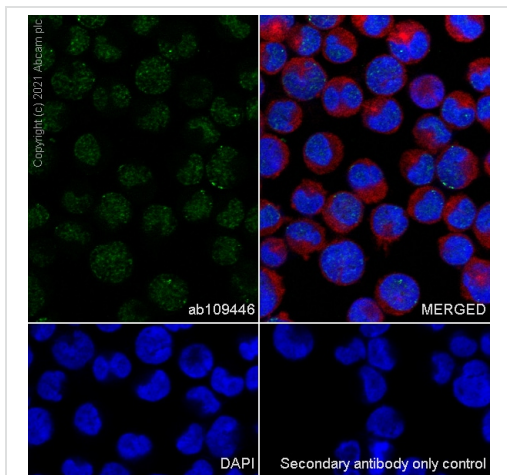
**All lanes :** Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 111 kDa



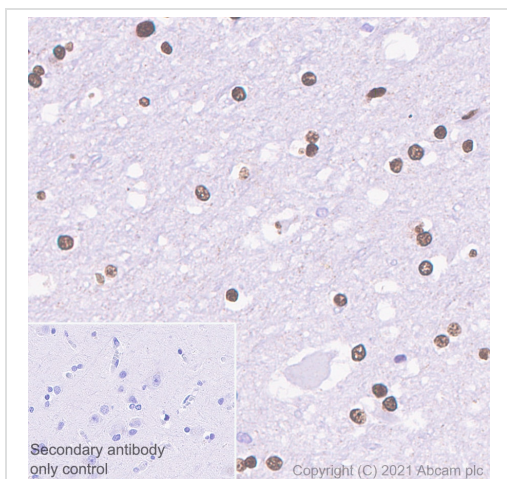
Flow Cytometry (Intracellular) - Anti-HDAC9 antibody [EPR5223] (ab109446)

Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labelling HDAC9 with Purified ab109446 at 1:100 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



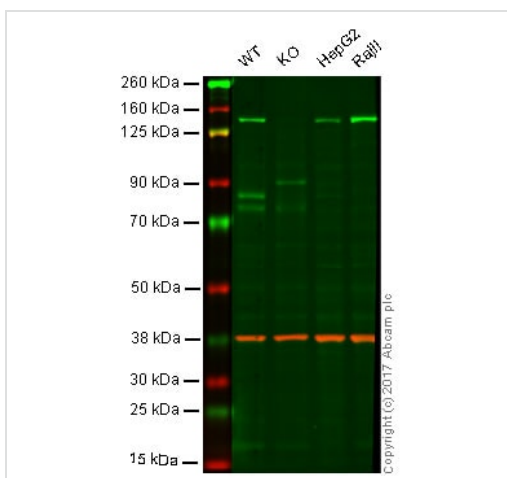
Immunocytochemistry/ Immunofluorescence - Anti-HDAC9 antibody [EPR5223] (ab109446)

Immunocytochemistry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) cells labeling HDAC9 with Purified ab109446 at 1:100 dilution (10 µg/ml). Cells were fixed in 100% Methanol and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC9 antibody [EPR5223] (ab109446)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cerebrum tissue sections labeling HDAC9 with Purified ab109446 at 1:1000 dilution (1.10 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.

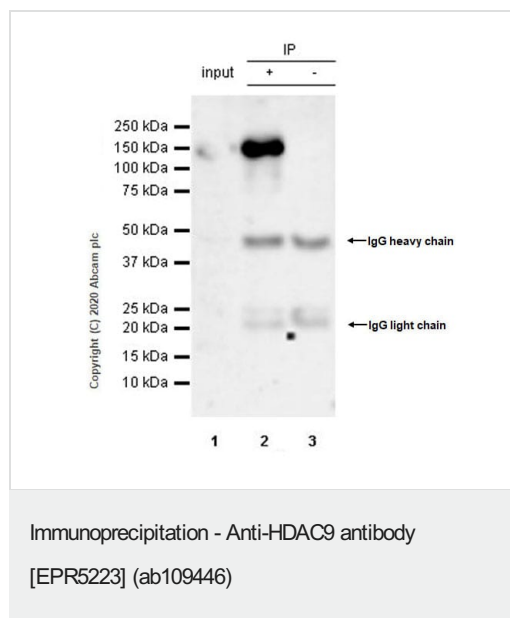


Western blot - Anti-HDAC9 antibody [EPR5223] (ab109446)

**Lane 1:** Wild-type HAP1 whole cell lysate (20 µg)  
**Lane 2:** HDAC9 (KO) knockout HAP1 whole cell lysate (20 µg)  
**Lane 3:** HepG2 whole cell lysate (20 µg)  
**Lane 4:** Raji whole cell lysate (20 µg)  
**Lanes 1 - 4:** Merged signal (red and green). Green - ab109446 observed at 140 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab109446 was shown to specifically recognize HDAC9 in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when HDAC9 knockout samples were used examined. Wild-type and HDAC9 knockout samples were

subjected to SDS-PAGE. Ab109446 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/10,000 dilution and 1/10,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



HDAC9 was immunoprecipitated from 0.35 mg K-562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate with ab109446 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using 260035 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(**ab131366**) was used at 1/5000 dilution.

Lane 1: K-562 whole cell lysate 10 µg

Lane 2: K-562 whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab109446 in K-562 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 111 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-HDAC9 antibody [EPR5223] (ab109446)

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

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