

Anti-HDAC1 antibody [EPR460(2)] ab109411






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概述

产品名称	Anti-HDAC1抗体[EPR460(2)]
描述	兔单克隆抗体[EPR460(2)] to HDAC1
宿主	Rabbit
经测试应用	适用于: Flow Cyt (Intra), IHC-P, WB, IHC-Fr, ICC/IF, IP 不适用于: ChIP
种属反应性	与反应: Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	IHC-Fr: Mouse hippocampus tissue. ICC/IF: NIH/3T3, 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"> - 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>

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: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR460(2)
同种型	IgG

应用

The Abpromise guarantee **Abpromise™**承诺保证使用ab109411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。

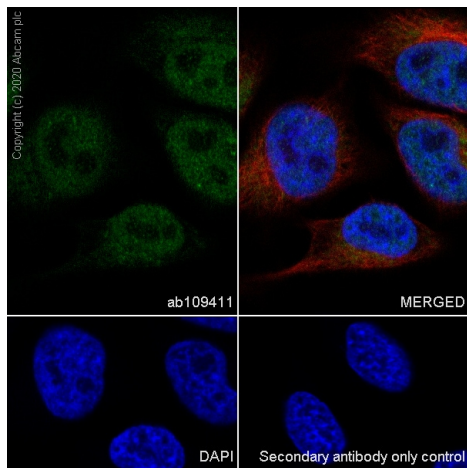
应用	Ab评论	说明
Flow Cyt (Intra)		1/50.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB	★★★★☆ (4)	1/1000 - 1/10000. Predicted molecular weight: 55 kDa.
IHC-Fr		1/500. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)
ICC/IF	★★★★★ (2)	1/50.
IP		1/30.

应用说明 Is unsuitable for ChIP.

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. Histone deacetylases act via the formation of large multiprotein complexes. Deacetylates SP proteins, SP1 and SP3, and regulates their function. Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons. Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation. Deacetylates TSHZ3 and regulates its transcriptional repressor activity. Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B.
组织特异性	Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain.
序列相似性	Belongs to the histone deacetylase family. HD type 1 subfamily.
翻译后修饰	Sumoylated on Lys-444 and Lys-476; which promotes enzymatic activity. Desumoylated by SENP1. Phosphorylation on Ser-421 and Ser-423 promotes enzymatic activity and interactions with NuRD and SIN3 complexes. Ubiquitinated by CHFR, leading to its degradation by the proteasome.
细胞定位	Nucleus.

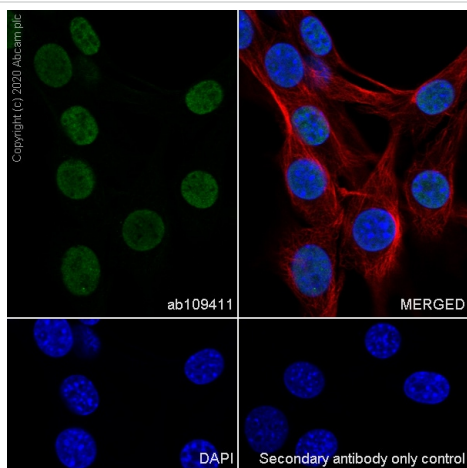
图片



Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling HDAC1 with ab109411 at 1/50 (10.92 ug/ml) dilution, followed by [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2ug/ml dilution (Green). Confocal image showing mainly nuclear staining in HeLa cell line [ab195889](#) Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue).

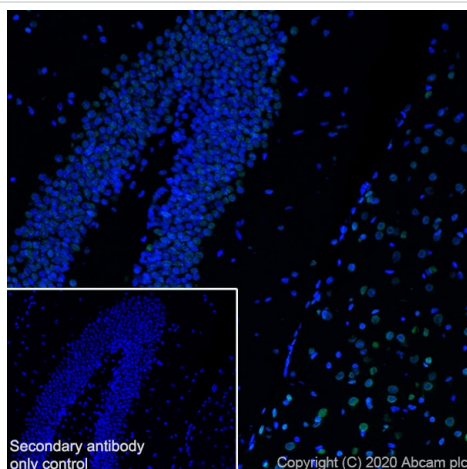
Secondary antibody only control: Secondary antibody is [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 2ug/ml dilution.



Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 cells labelling HDAC1 with ab109411 at 1/50 (10.92 ug/ml) dilution, followed by [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2ug/ml dilution (Green). Confocal image showing nuclear staining in NIH/3T3 cell line [ab195889](#) Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 2ug/ml dilution.

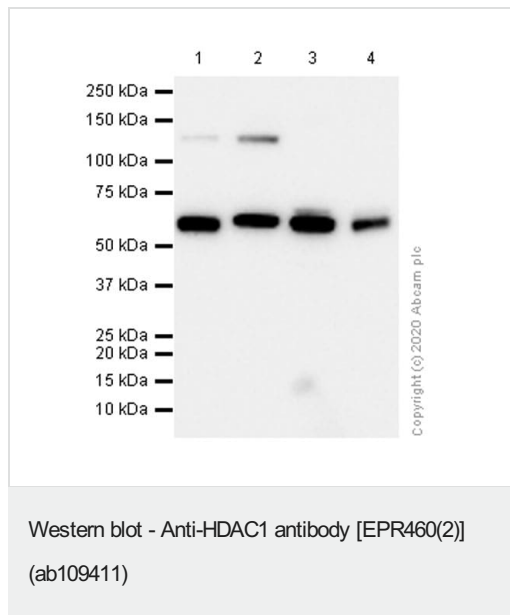


Immunohistochemistry (Frozen sections) - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse hippocampus tissue labeling HDAC1 with ab109411 at 1/500 (5.55 ug/ml) dilution followed by [ab150077](#) AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 (2 ug/ml) dilution (Green). Nuclear staining on mouse hippocampus. is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is [ab150077](#) AlexaFluor®488 Goat anti-Rabbit secondary at 1000 (2 ug/ml) dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



All lanes : Anti-HDAC1 antibody [EPR460(2)] (ab109411) at 1/1000 dilution (Purified)

Lane 1 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

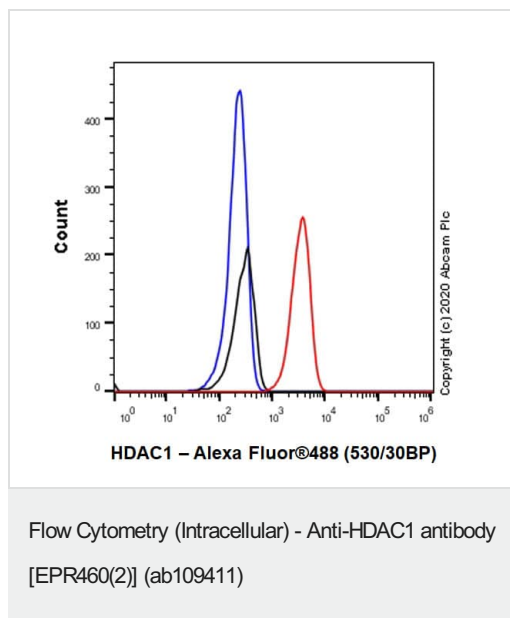
Lane 3 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

Lane 4 : C6 (Rat glial tumor glial cell) whole cell lysate

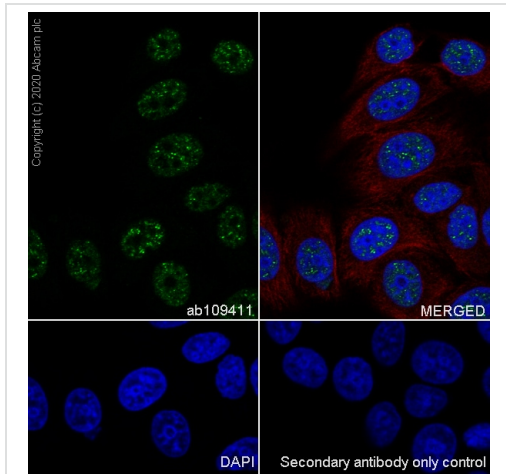
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 55 kDa

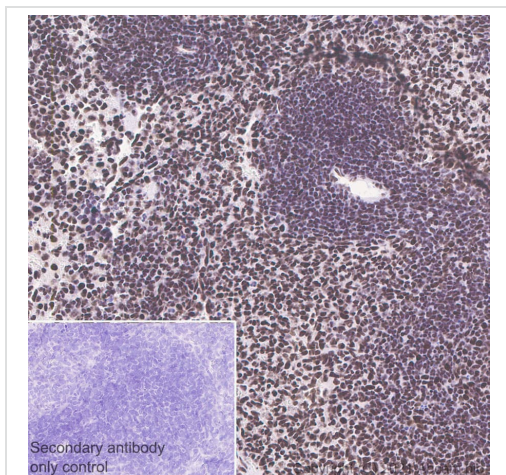


Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labelling HDAC1 with Purified ab109411 at 1:20 dilution (5 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150081](#)) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



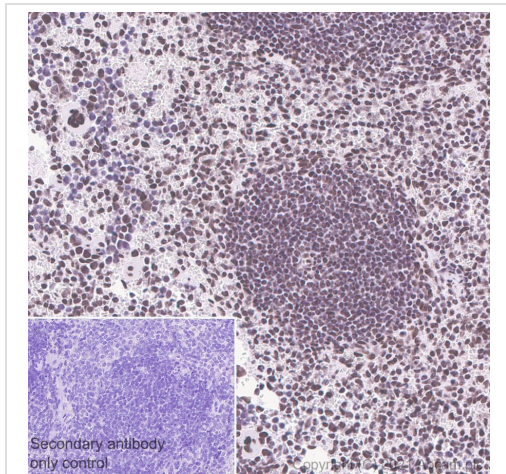
Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunocytochemistry analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling HDAC1 with Purified ab109411 at 1:50 dilution (2.4 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.



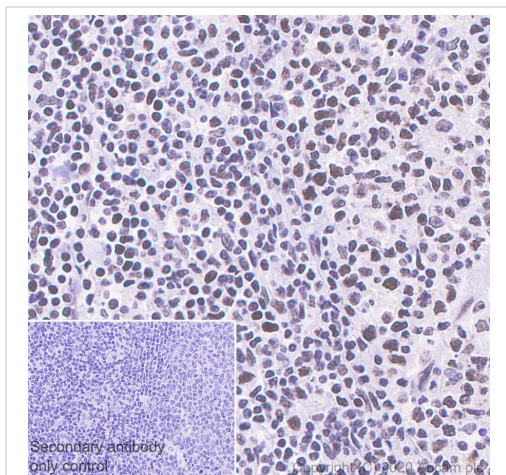
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat spleen tissue sections labeling HDAC1 with Purified ab109411 at 1:100 dilution (1.2 µg/ml). Heat mediated antigen retrieval was performed using . Tissue was counterstained with Hematoxylin. Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



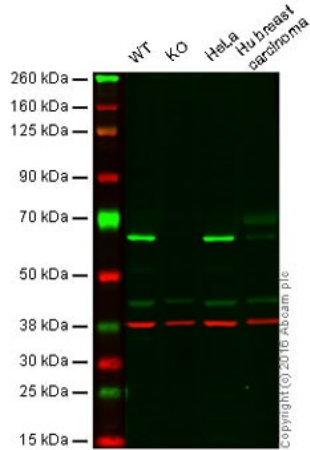
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse spleen tissue sections labeling HDAC1 with Purified ab109411 at 1:100 dilution (1.2 µg/ml). Heat mediated antigen retrieval was performed using . Tissue was counterstained with Hematoxylin. Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue sections labeling HDAC1 with Purified ab109411 at 1:100 dilution (1.2 µg/ml). Heat mediated antigen retrieval was performed using . Tissue was counterstained with Hematoxylin. Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

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

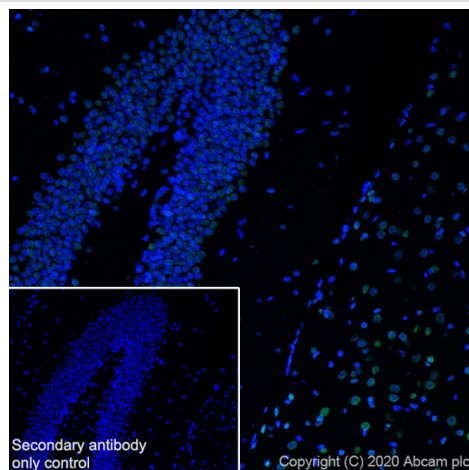
Lane 2: HDAC1 knockout HAP1 cell lysate (20 µg)

Lane 3: HeLa cell lysate (20 µg)

Lane 4: Human breast carcinoma lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab109411 observed at 65 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab109411 was shown to recognize HDAC1 when HDAC1 knockout samples were used, along with additional cross-reactive bands. Wild-type and HDAC1 knockout samples were subjected to SDS-PAGE. ab109411 and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/10,000 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 1/10,000 dilution for 1 h at room temperature before imaging

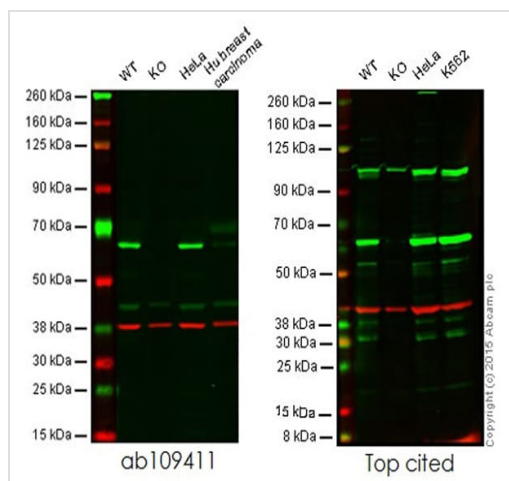


Immunohistochemistry (Frozen sections) - Anti-HDAC1 antibody [EPR460(2)] (ab109411)

Immunohistochemical analysis of 4% PFA fixed, 0.2% Triton X-100 permeabilised Mouse hippocampus staining HDAC1 with ab109411 at 1/500 dilution (5.55 µg/ml). **ab150077** AlexaFluor®488 Goat anti-Rabbit was used as a secondary at 1/1000 (2 µg/ml) dilution. Nuclear counterstain: DAPI.

Nuclear staining on mouse hippocampus.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)



Western blot - Anti-HDAC1 antibody [EPR460(2)]
(ab109411)

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

Lane 2: HDAC1 knockout HAP1 cell lysate (20 µg)

Lane 3: HeLa cell lysate (20 µg)

Lane 4: Human breast carcinoma lysate (20 µg) or K562 lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab109411 observed at 65 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

This western blot image is a comparison between ab109411 and a competitor's top cited rabbit polyclonal antibody.

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-HDAC1 antibody [EPR460(2)] (ab109411)

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