abcam

Product datasheet

Anti-HDAC1 antibody [RM1004] ab281585

重组 RabMAb

13 图像

概述

产品名称	Anti-HDAC1抗体[RM1004]
描述	兔重组multiclonal [RM1004] to HDAC1
宿主	Rabbit
经测试应用	**适用于:** IP, ICC/IF, Flow Cyt (Intra), IHC-Fr, IHC-P, WB **不适用于:** ChIP
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	**This product was produced with the following immunogens:** Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HeLa, HAP1, Jurkat, NIH/3T3 and C6 whole cell lysates. IHC-P: Human, mouse and rat testis tissues. IHC-Fr: Mouse and rat hippocampus tissues. ICC/IF: HeLa and NIH/3T3 cells. Flow Cyt (intra): HeLa and NIH/3T3 cells. IP: Jurkat whole cell lysate.
常规说明	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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 long term. Avoid freeze / thaw cycle.
存储溶液	Preservative: 0.01% Sodium azide Constituents: 59.94% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	Recombinant Multiclonal
克隆编号	RM1004
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab281585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
IP		1/30.
ICC/IF		1/50.
Flow Cyt (Intra)		1/500.
IHC-Fr		1/100. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)
IHC-P		1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Predicted molecular weight: 55 kDa.

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.

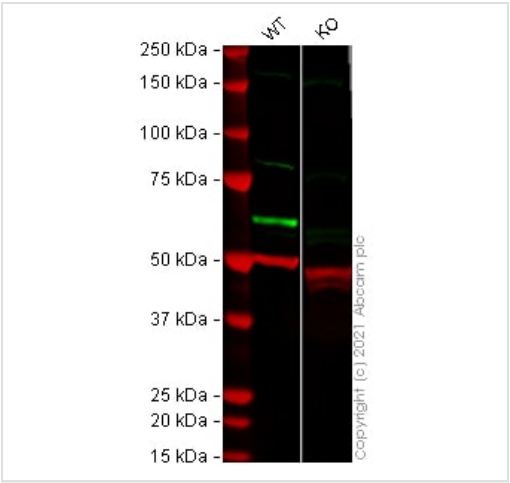
组织特异性 Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain.

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



Western blot - Anti-HDAC1 antibody [RM1004] (ab281585)

All lanes : Anti-HDAC1 antibody [RM1004] (ab281585) at 1/1000 dilution

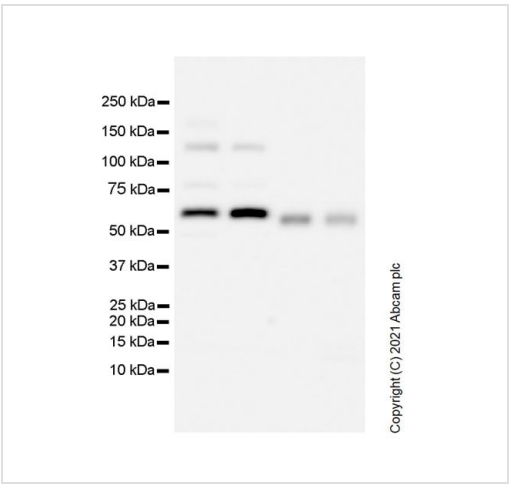
Lane 1 : Wild-type HAP1 cell lysate
Lane 2 : HDAC1 knockout HAP1 cell lysate

Lysates/proteins at 40 µg per lane.

Performed under reducing conditions.

Predicted band size: 55 kDa
Observed band size: 60 kDa

False colour image of Western blot: Anti-HDAC1 antibody [RM1004] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (**ab7291**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab281585 was shown to bind specifically to HDAC1. A band was observed at 60 kDa in wild-type HAP1 cell lysates with no signal observed at this size in HDAC1 knockout cell line. To generate this image, wild-type and HDAC1 knockout HAP1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-HDAC1 antibody [RM1004] (ab281585)

All lanes : Anti-HDAC1 antibody [RM1004] (ab281585) at 1/1000 dilution

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma), whole cell lysate
Lane 2 : Jurkat (human T cell leukemia T lymphocyte), whole cell lysate
Lane 3 : NIH/3T3 (mouse embryonic fibroblast), whole cell lysate
Lane 4 : C6 (rat glial tumor glial cell), whole cell lysate

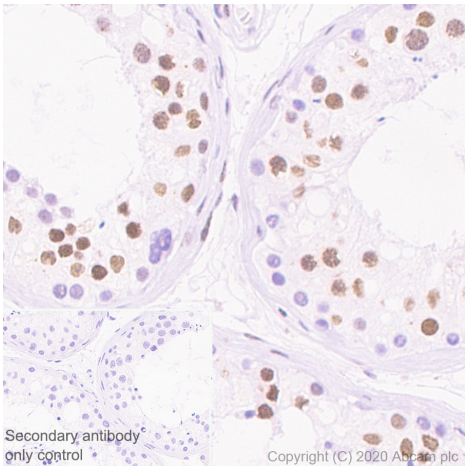
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

Predicted band size: 55 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST

Exposure time: 5 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [RM1004] (ab281585)

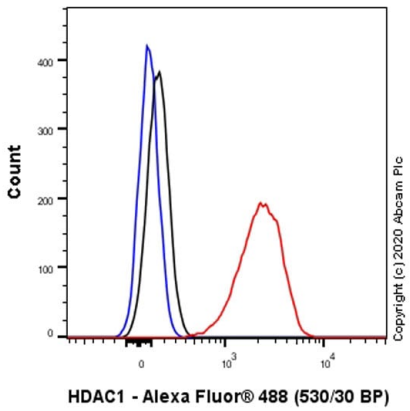
Immunohistochemical analysis of paraffin-embedded human testis tissue labelling HDAC1 with ab281585 at 1/4000 (0.13 µg/ml) dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Nuclear staining on human testis (PMID:16960727).

The section was incubated with ab281585 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

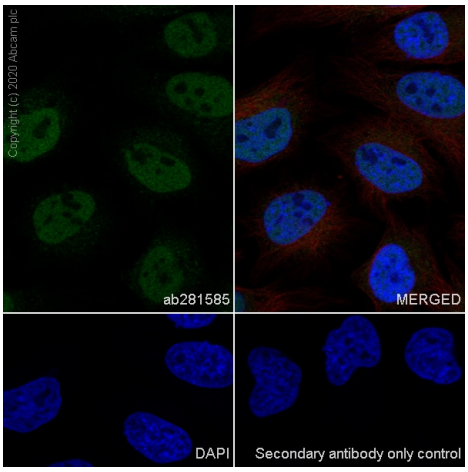
Secondary antibody only control: Secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-HDAC1 antibody [RM1004] (ab281585)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (Human cervix adenocarcinoma cell) cells labelling HDAC1 with ab281585 at 1/500 dilution (0.1 µg) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.

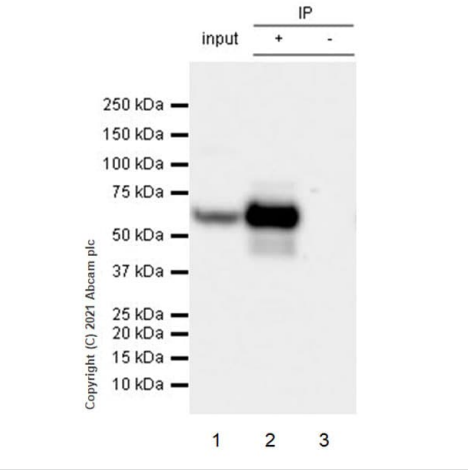


Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [RM1004] (ab281585)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa cells labelling HDAC1 with ab281585 at 1/50 (10.4 µg/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

Confocal image showing mostly nuclear staining in HeLa cell line.

Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Immunoprecipitation - Anti-HDAC1 antibody [RM1004] (ab281585)

HDAC1 was immunoprecipitated from 0.35 mg Jurkat (human T cell leukemia T lymphocyte), whole cell lysate 10 µg with ab281585 at 1/30 dilution (2 µg in 0.35 mg lysates). Western blot was performed on the immunoprecipitate using ab281585 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(**ab131366**) was used at 1/5000 dilution.

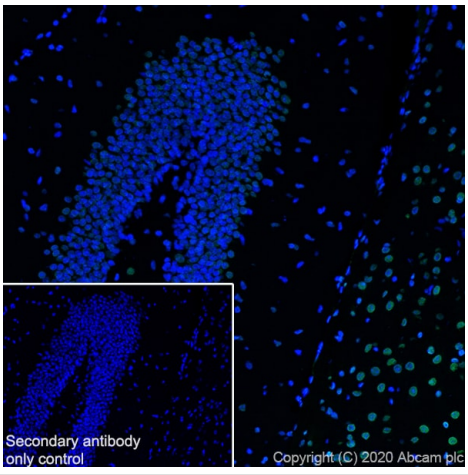
Lane 1: Jurkat whole cell lysate 10 µg

Lane 2: ab281585 IP in Jurkat whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab281585 in Jurkat whole cell lysate

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

Exposure time: 3 seconds.



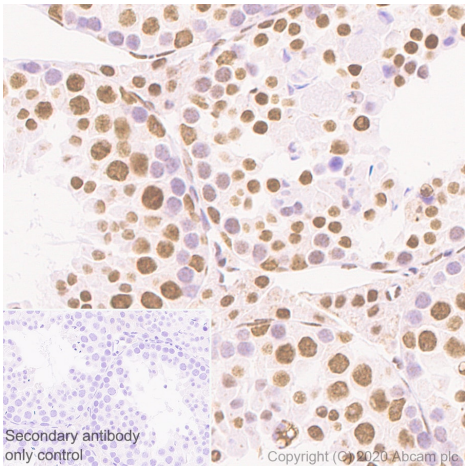
Immunohistochemistry (Frozen sections) - Anti-HDAC1 antibody [RM1004] (ab281585)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse hippocampus tissue labeling HDAC1 with ab281585 at 1/100 (5.55 µg/ml) dilution followed by **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). The nuclear counterstain was DAPI (Blue).

Nuclear staining on mouse hippocampus is observed.

Secondary antibody control: Secondary antibody is **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [RM1004] (ab281585)

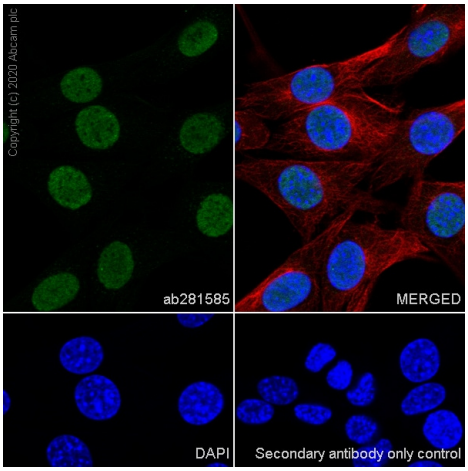
Immunohistochemical analysis of paraffin-embedded mouse testis tissue labelling HDAC1 with ab281585 at 1/4000 (0.13 µg/ml) dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Nuclear staining on mouse testis.

The section was incubated with ab281585 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

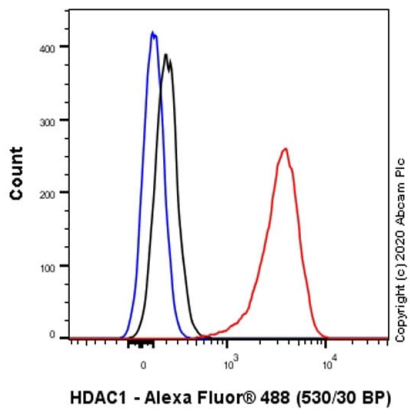


Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [RM1004] (ab281585)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 cells labelling HDAC1 with ab281585 at 1/50 (10.4 µg/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

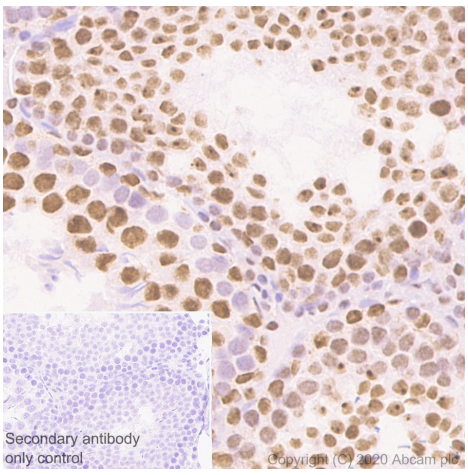
Confocal image showing mostly nuclear staining in NIH/3T3 cell line.

Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-HDAC1 antibody [RM1004] (ab281585)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast) cells labelling HDAC1 with ab281585 at 1/500 dilution (0.1 µg) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [RM1004] (ab281585)

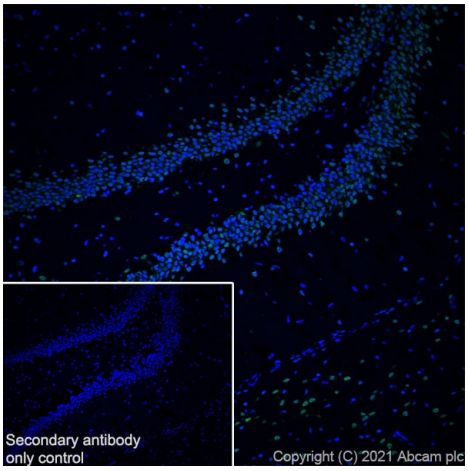
Immunohistochemical analysis of paraffin-embedded rat testis tissue labelling HDAC1 with ab281585 at 1/4000 (0.13 µg/ml) dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Nuclear staining on rat testis.

The section was incubated with ab281585 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



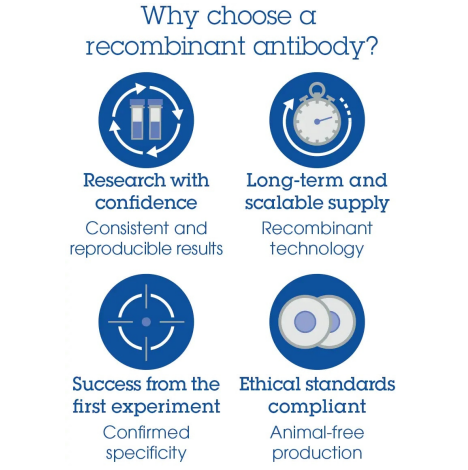
Immunohistochemistry (Frozen sections) - Anti-HDAC1 antibody [RM1004] (ab281585)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen rat hippocampus tissue labeling HDAC1 with ab281585 at 1/100 (5.55 µg/ml) dilution followed by **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (Green). The nuclear counterstain was DAPI (Blue).

Nuclear staining on rat hippocampus is observed.

Secondary antibody control: Secondary antibody is **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

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



Anti-HDAC1 antibody [RM1004] (ab281585)

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