abcam

Product datasheet

Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free ab248968

敲除验证 重组 RabMAb

14 图像

概述

产品名称	Anti-HDAC1抗体[EPR5517(2)] - BSA and Azide free
描述	兔单克隆抗体[EPR5517(2)] to HDAC1 - BSA and Azide free
宿主	Rabbit
经测试应用	**适用于:** ICC/IF, IHC-P, ChIC/CUT&RUN-seq, Flow Cyt (Intra), IP, WB
种属反应性	**与反应:** Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	ICC/IF: HeLa cell. Flow Cyt: HeLa cell. ChIC/CUT&RUN-Seq: HeLa cells.
常规说明	ab248968 is the carrier-free version of **ab150399**.

Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information **see here**.

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. Do Not Freeze.
存储溶液	pH: 7.2 Constituent: PBS
无载体	是
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR5517(2)
同种型	IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab248968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。

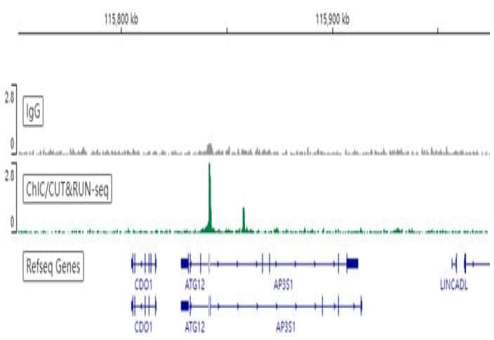
应用	Ab评论	说明
ICC/IF		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ChIC/CUT&RUN-seq		Use at an assay dependent concentration.
Flow Cyt (Intra)		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 55 kDa.

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



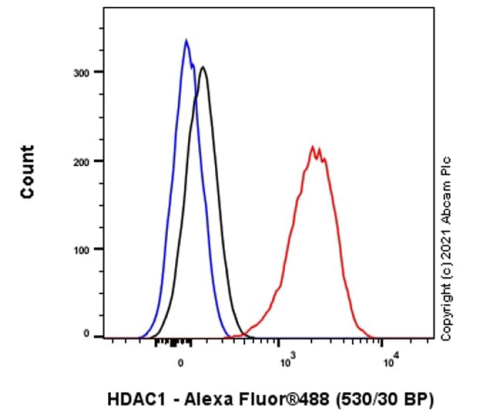
ChIC/CUT&RUN sequencing - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/mL, 2 x 10^5 HeLa (Human cervix adenocarcinoma epithelial cell line) cells and 5 µg of **ab150399** [EPR5517(2)]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control **ab172730** is also shown.

Additional screenshots of mapped reads can be downloaded **here**.

The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.

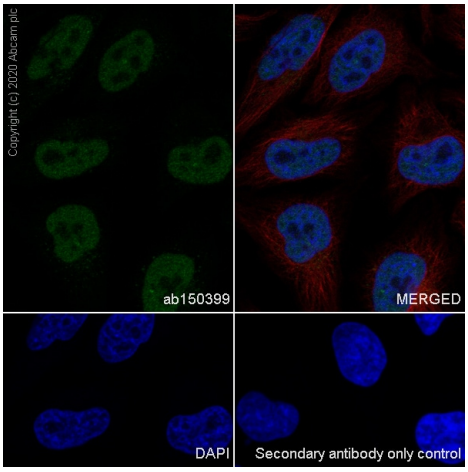
This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.



Flow Cytometry (Intracellular) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling HDAC1 with **ab150399** at 1/500 dilution (0.1ug) (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.

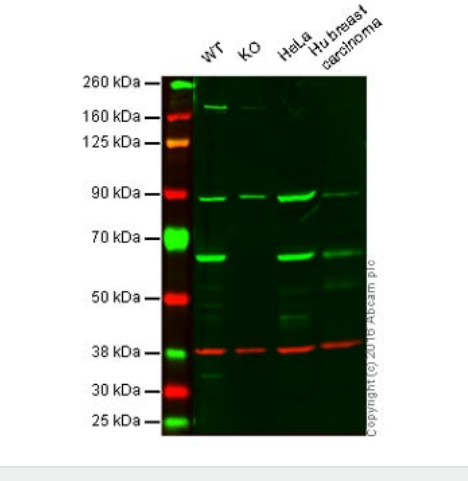


Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling HDAC1 with **ab150399** at 1/100 (5.17 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 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.



Western blot - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.

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

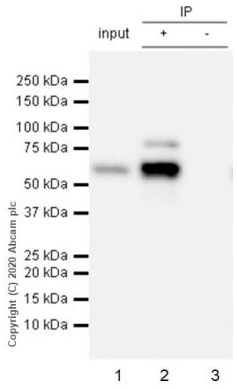
Lane 2 HDAC1 knockout HAP1 cell lysate (20 µg)

Lane 3 HeLa cell lysate (20 µg)

Lane 4 Human breast carcinoma lysate (20 µg)

Lanes 1 - 4 Merged signal (red and green). Green - **ab150399** observed at 65 kDa. Red - loading control, **ab8245** observed at 37 kDa.

ab150399 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. **ab150399** and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/10000 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.



Immunoprecipitation - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.

Purified **ab150399** at 1/30 dilution (2µg) immunoprecipitating HDAC1 in Jurkat whole cell lysate.

Lane 1 (input): Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate 10µg

Lane 2 (+): **ab150399** + Jurkat whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab150399** in Jurkat whole cell lysate.

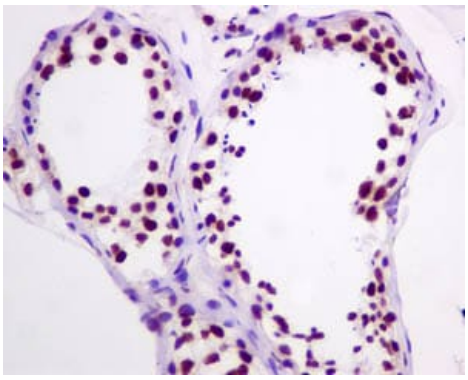
VeriBlot for IP Detection Reagent (HRP) (**ab131366**) (1/1000 dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM/TBST.

Observed band size: 62 kDa

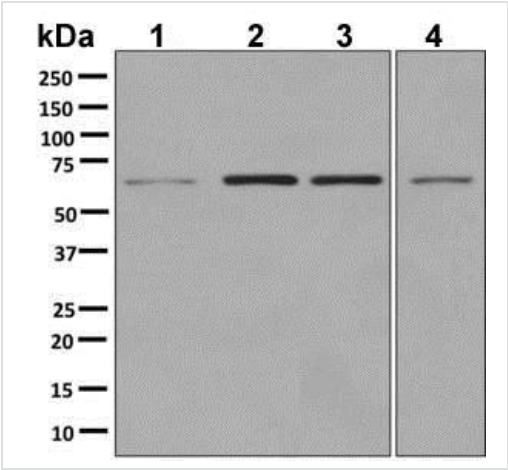
Faint band above 62kDa could be Sumoylated HDAC1. (PMID: 28186506)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling HDAC1 with **ab150399** at 1/50 dilution. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

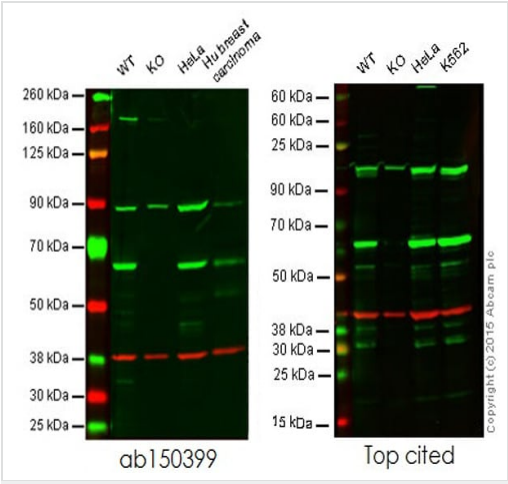
All lanes : Anti-HDAC1 antibody [EPR5517(2)] (**ab150399**) at 1/1000 dilution

Lane 1 : K562 cell lysate
Lane 2 : Jurkat cell lysate
Lane 3 : MCF7 cell lysate
Lane 4 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 55 kDa

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.



Western blot - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.

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

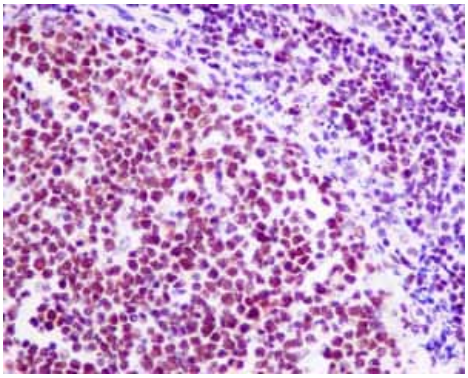
Lane 2: HDAC1 knockout HAP1 cell lysate (20 ÂµÂµg)

Lane 3: HeLa cell lysate (20 ÂµÂµg)

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

Lanes 1 - 4: Merged signal (red and green). Green - **ab150399** observed at 65 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

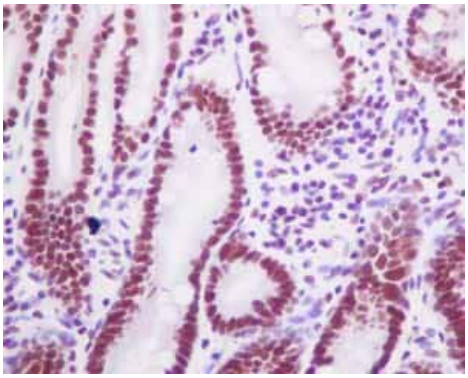
This western blot image is a comparison between **ab150399** and a competitor's top cited rabbit polyclonal antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin embedded normal Human tonsil tissue using **ab150399** showing +ve staining.

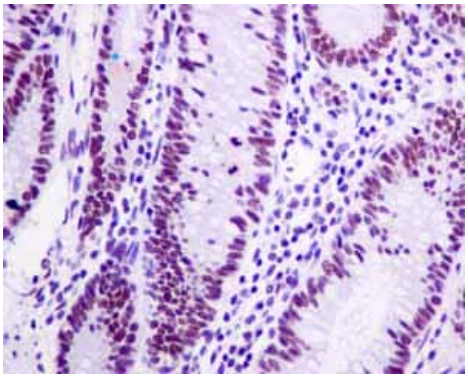
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin embedded normal Human stomach tissue using **ab150399** showing +ve staining.

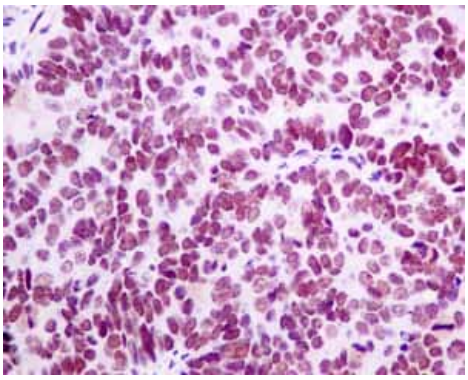
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin embedded normal Human colon tissue using **ab150399** showing +ve staining.

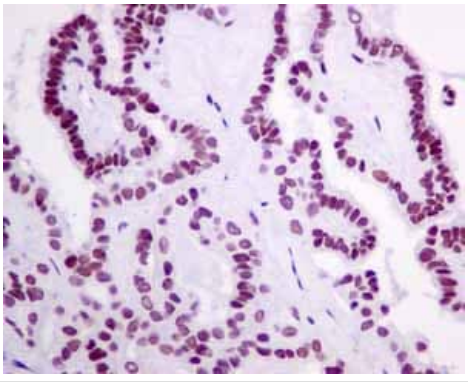
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin embedded Human Ovarian carcinoma tissue using **ab150399** showing +ve staining.

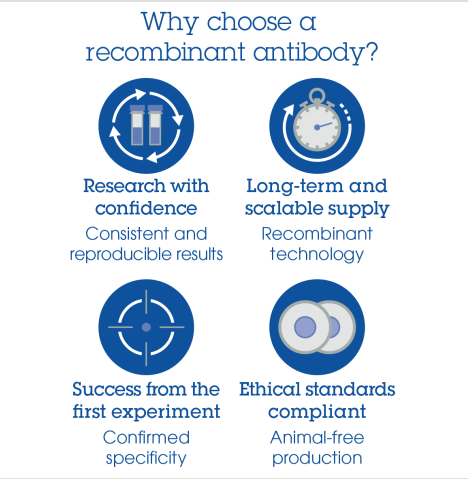
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

This data was developed using **ab150399**, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin embedded Human Thyroid gland carcinoma tissue using **ab150399** showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Anti-HDAC1 antibody [EPR5517(2)] - BSA and Azide free (ab248968)

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