abcam

Product datasheet

Anti-HDAC1 antibody [EPR5517(2)] ab150399

KO 評価済 リコンビナント RabMAb

1 Abreviews 4 References 画像数 14

製品の概要

製品名	Anti-HDAC1 antibody [EPR5517(2)]
製品の詳細	Rabbit monoclonal [EPR5517(2)] to HDAC1
由来種	Rabbit
アプリケーション	**適用あり:** ICC/IF, Flow Cyt (Intra), ChIC/CUT&RUN-seq, WB, IHC-P, IP
種交差性	**交差種:** Human
免疫原	Synthetic peptide within Human HDAC1 aa 1-100 (N terminal). The exact sequence is proprietary.
ポジティブ・コントロール	ICC/IF: HeLa cell. Flow Cyt: HeLa cell. ChIC/CUT&RUN-Seq: HeLa cells.
特記事項	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**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at -20ºC.
バッファー	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
精製度	Protein A purified
ポリ/モノ	モノクローナル

クローン名	EPR5517(2)
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab150399の使用に適用されます

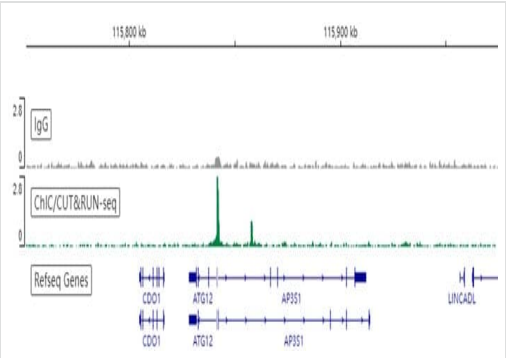
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
ICC/IF		Use at an assay dependent concentration.
Flow Cyt (Intra)		1/500.
ChIC/CUT&RUN-seq		Use at an assay dependent concentration. 5 µg
WB	★☆☆☆☆ (1)	1/1000 - 1/10000. Predicted molecular weight: 55 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IP		1/10 - 1/100.

ターゲット情報

機能	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.
組織特異性	Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain.
配列類似性	Belongs to the histone deacetylase family. HD type 1 subfamily.
翻訳後修飾	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.
細胞内局在	Nucleus.

画像

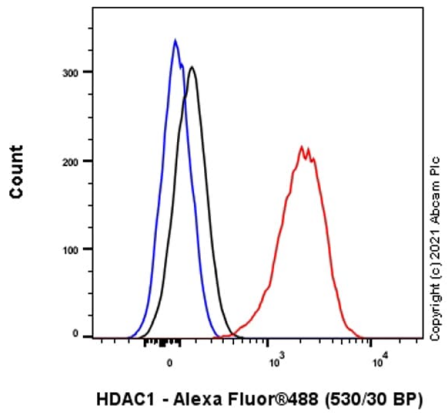


ChIC/CUT&RUN sequencing - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

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.

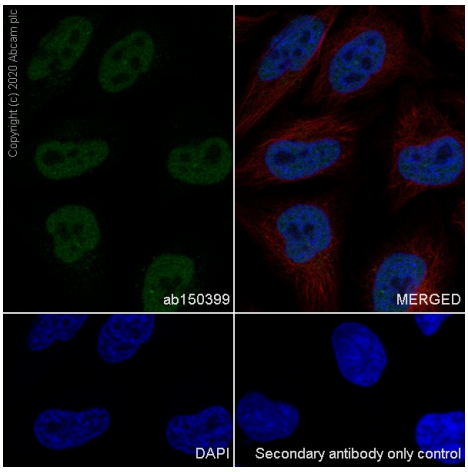
Additional screenshots of mapped reads can be downloaded **here**.

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



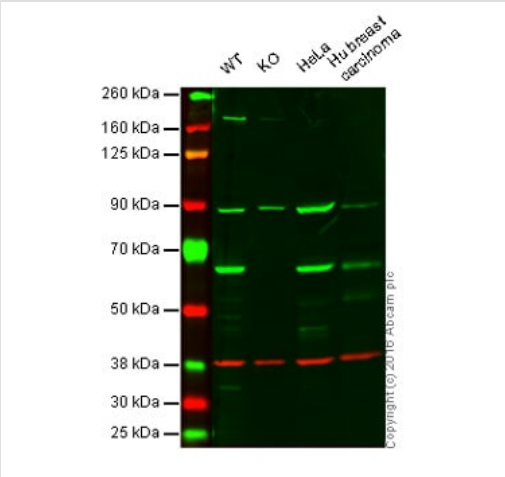
Flow Cytometry (Intracellular) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

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)] (ab150399)

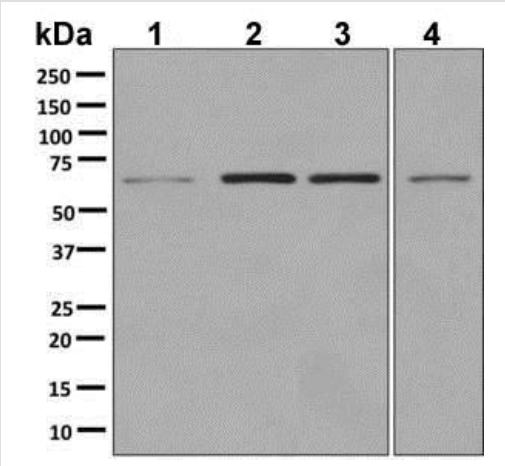
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling HDAC1 with ab150399 at 1/100 (5.17 ug/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 2ug/ml dilution (Green). Confocal image showing nuclear 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)] (ab150399)

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.



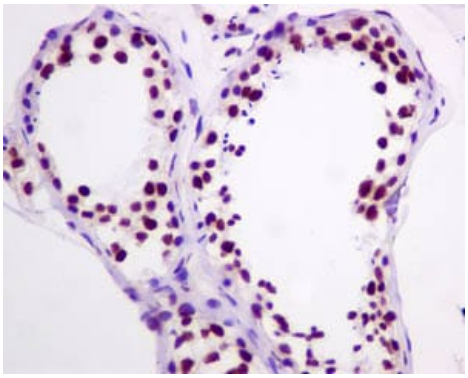
Western blot - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

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.

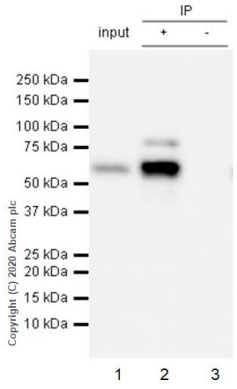
Predicted band size: 55 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

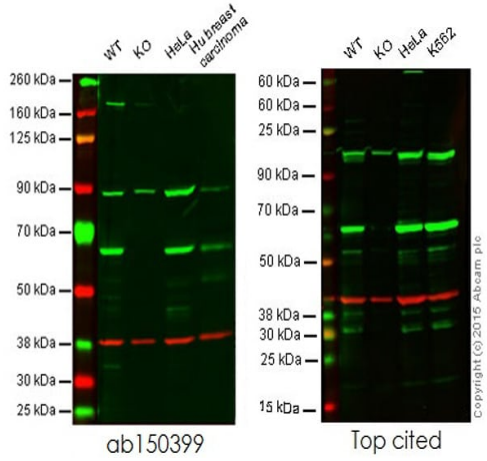
Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling HDAC1 with ab150399 at 1/50 dilution.

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



Immunoprecipitation - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

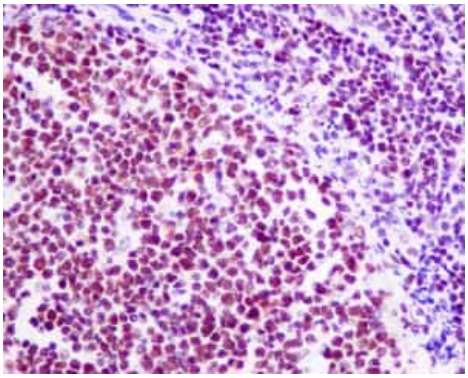
Purified ab150399 at 1/30 dilution (2µg) immunoprecipitating HDAC1 in Jurkat whole cell lysate.
Lane 1 (input): Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate 10µg
Lane 2 (+): ab150399 + Jurkat whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab150399 in Jurkat 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)



Western blot - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

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 - ab150399 observed at 65 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

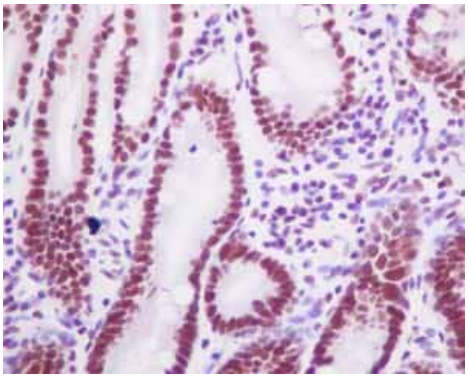
This western blot image is a comparison between ab150399 and a competitor's top cited rabbit polyclonal antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

Immunohistochemical analysis of paraffin embedded normal Human tonsil tissue using ab150399 showing +ve staining.

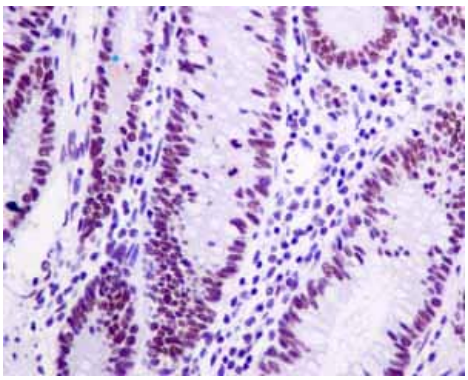
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

Immunohistochemical analysis of paraffin embedded normal Human stomach tissue using ab150399 showing +ve staining.

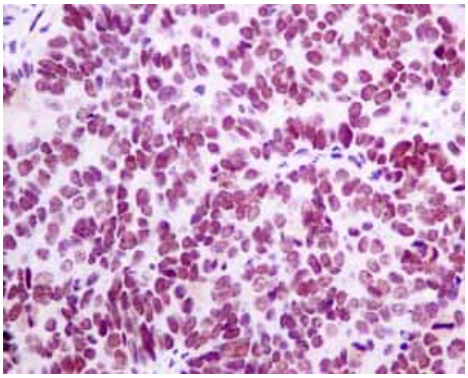
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

Immunohistochemical analysis of paraffin embedded normal Human colon tissue using ab150399 showing +ve staining.

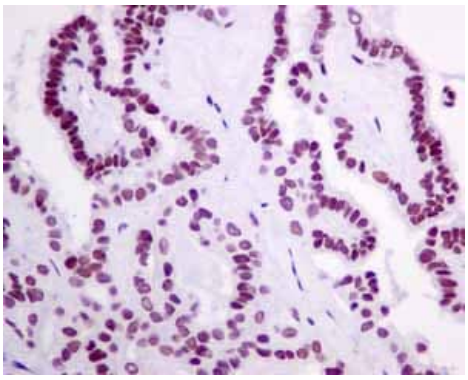
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

Immunohistochemical analysis of paraffin embedded Human Ovarian carcinoma tissue using ab150399 showing +ve staining.

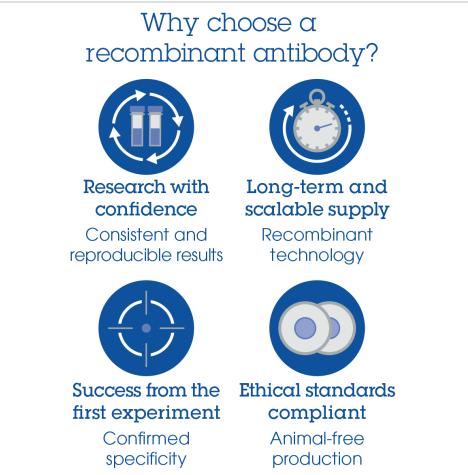
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC1 antibody [EPR5517(2)] (ab150399)

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)] (ab150399)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.co.jp/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors