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Product datasheet

Anti-HDAC2 antibody [3F3] ab51832

KO 評価済

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製品の概要

製品名	Anti-HDAC2 antibody [3F3]
製品の詳細	Mouse monoclonal [3F3] to HDAC2
由来種	Mouse
アプリケーション	**適用あり:** Flow Cyt (Intra), WB, ICC/IF
種交差性	**交差種:** Mouse, Human **交差が予測される動物種:** Rat, Chicken, Cow
免疫原	Synthetic peptide corresponding to Human HDAC2 aa 450-550.
ポジティブ・コントロール	Nuclear extract of HeLa cells and HAP1 whole cell lysate . IF/ICC: MCF7 cell line.
特記事項	This monoclonal antibody to HDAC2 has been knockout validated in Western blot. The expected band for HDAC2 was observed in wild type cells and the band was not seen in HDAC2 knockout cells. This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
バッファー	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS

精製度	Protein G purified
ポリ/モノ	モノクローナル
クローン名	3F3
アイソタイプ	IgG1

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ab51832の使用に適用されます**

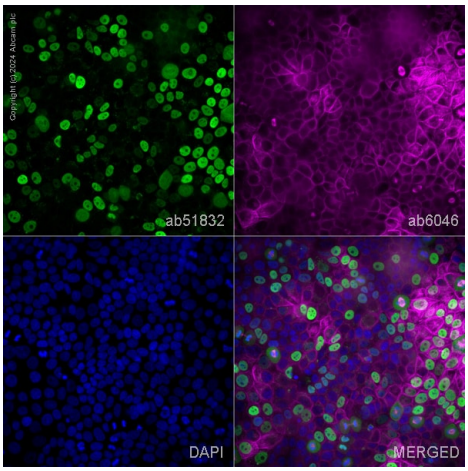
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
Flow Cyt (Intra)		Use 1µg for 10^6 cells. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (4)	1/1000 - 1/10000. Detects a band of approximately 55 kDa (predicted molecular weight: 55 kDa).
ICC/IF	★★★★★ (1)	1/25 - 1/100.

ターゲット情報

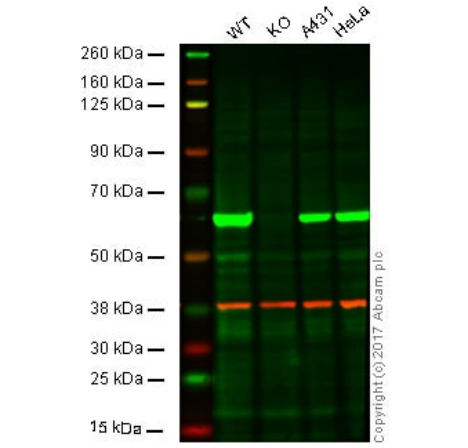
機能	Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Forms transcriptional repressor complexes by associating with MAD, SIN3, YY1 and N-COR. Interacts in the late S-phase of DNA-replication with DNMT1 in the other transcriptional repressor complex composed of DNMT1, DMAP1, PCNA, CAF1. Deacetylates TSHZ3 and regulates its transcriptional repressor activity.
組織特異性	Widely expressed; lower levels in brain and lung.
配列類似性	Belongs to the histone deacetylase family. HD type 1 subfamily.
翻訳後修飾	S-nitrosylated by GAPDH. In neurons, S-Nitrosylation at Cys-262 and Cys-274 does not affect the enzyme activity but abolishes chromatin-binding, leading to increases acetylation of histones and activate genes that are associated with neuronal development. In embryonic cortical neurons, S-Nitrosylation regulates dendritic growth and branching.
細胞内局在	Nucleus.

画像



Immunocytochemistry/ Immunofluorescence - Anti-HDAC2 antibody [3F3] (ab51832)

ab51832 staining HDAC2 in MCF7 cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab51832 at 5µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue). Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

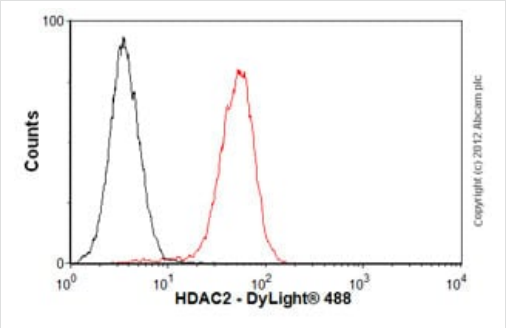


Western blot - Anti-HDAC2 antibody [3F3] (ab51832)

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: HDAC2 knockout HAP1 whole cell lysate (20 µg)
Lane 3: A431 whole cell lysate (20 µg)
Lane 4: HeLa whole cell lysate (20 µg)

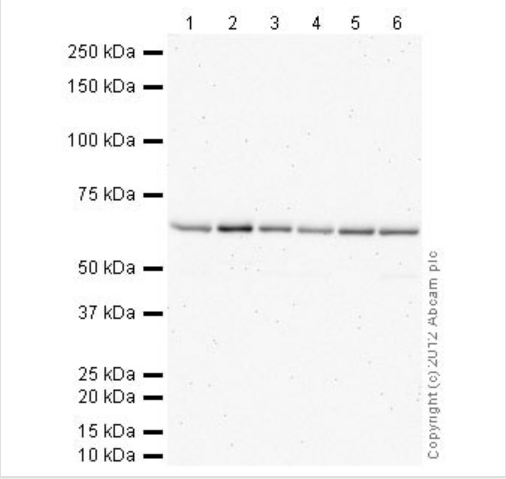
Lanes 1 - 4: Merged signal (red and green). Green - ab51832 observed at 65 kDa. Red - loading control, **ab181602**, observed at 37 kDa.

ab51832 detected the expected band for HDAC2 in wild-type HAP1 cells and the band was not seen in HDAC2 knockout HAP1 cells. Wild-type and HDAC2 knockout samples were subjected to SDS-PAGE. ab51832 and **ab181602** (Rabbit anti GAPDH loading control) were incubated overnight at 4°C at 1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed **ab216772** and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed **ab216777** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry (Intracellular) - Anti-HDAC2 antibody [3F3] (ab51832)

Overlay histogram showing HeLa cells stained with ab51832 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab51832, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Western blot - Anti-HDAC2 antibody [3F3] (ab51832)

All lanes : Anti-HDAC2 antibody [3F3] (ab51832) at 5 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : HeLa (Human epithelial carcinoma cell line) Nuclear Lysate
Lane 3 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate
Lane 4 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate
Lane 5 : K562 (Human erythromyeloblastoid leukemia cell line) Whole Cell Lysate
Lane 6 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Mouse IgG H&L (HRP) preadsorbed (**ab97040**) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 55 kDa

Observed band size: 65 kDa

Exposure time: 16 minutes

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab51832 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

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