abcam

Product datasheet

Anti-HDAC4 antibody ab111318

KO 評価済

1 Abreviews　画像数 4

製品の概要

製品名	Anti-HDAC4 antibody
製品の詳細	Rabbit polyclonal to HDAC4
由来種	Rabbit
アプリケーション	**適用あり:** ICC/IF, WB
種交差性	**交差種:** Human **交差が予測される動物種:** Mouse, Rat, Cow, Chimpanzee, Macaque monkey, Gorilla, Orangutan
免疫原	Synthetic peptide conjugated to KLH derived from within residues 1 - 100 of Human HDAC4.Immunogen の所有権に関して
ポジティブ・コントロール	This antibody gave a positive signal in the following whole cell lysates: HeLa; HEK293; U20S; HepG2; NIH3T3. This antibody gave a positive result when used in the following formaldehyde fixed cell lines: HeLa.

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 or -80°C. Avoid freeze / thaw cycle.
バッファー	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
精製度	Immunogen affinity purified
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

Our Abpromise guarantee covers the use of **ab111318** in the following tested applications.

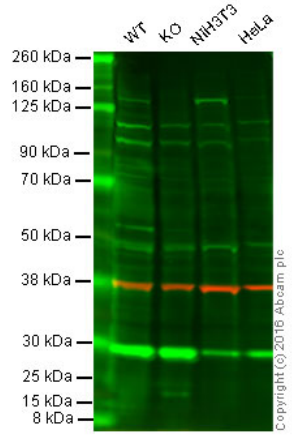
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Abreviews	特記事項
ICC/IF	★★★★☆	1/200. Use with paraformaldehyde fixed cells.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 119 kDa (predicted molecular weight: 119 kDa). Abcam recommends using milk as the blocking agent (3%)

ターゲット情報

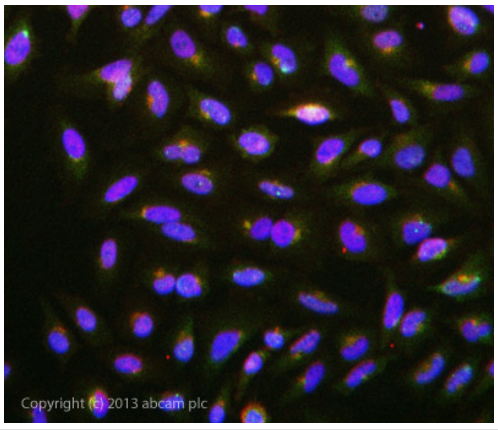
機能	Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Involved in muscle maturation via its interaction with the myocyte enhancer factors such as MEF2A, MEF2C and MEF2D.
組織特異性	Ubiquitous.
関連疾患	Defects in HDAC4 are the cause of brachydactyly-mental retardation syndrome (BDMR) [MIM:600430]. A syndrome resembling the physical anomalies found in Albright hereditary osteodystrophy. Common features are mild facial dysmorphism, congenital heart defects, distinct brachydactyly type E, mental retardation, developmental delay, seizures, autism spectrum disorder, and stocky build. Soft tissue ossification is absent, and there are no abnormalities in parathyroid hormone or calcium metabolism.
配列類似性	Belongs to the histone deacetylase family. HD type 2 subfamily.
ドメイン	The nuclear export sequence mediates the shuttling between the nucleus and the cytoplasm.
翻訳後修飾	Phosphorylated by CaMK4 at Ser-246, Ser-467 and Ser-632. Phosphorylation at other residues is required for the interaction with 14-3-3. Sumoylation on Lys-559 is promoted by the E3 SUMO-protein ligase RANBP2, and prevented by phosphorylation by CaMK4.
細胞内局在	Nucleus. Cytoplasm. Shuttles between the nucleus and the cytoplasm. Upon muscle cells differentiation, it accumulates in the nuclei of myotubes, suggesting a positive role of nuclear HDAC4 in muscle differentiation. The export to cytoplasm depends on the interaction with a 14-3-3 chaperone protein and is due to its phosphorylation at Ser-246, Ser-467 and Ser-632 by CaMK4. The nuclear localization probably depends on sumoylation.

画像



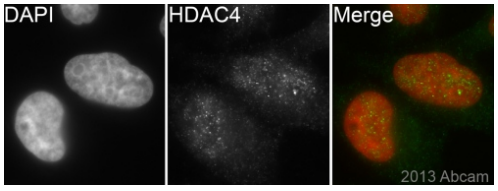
Western blot - Anti-HDAC4 antibody (ab111318)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: HDAC4 knockout HAP1 cell lysate (20 µg)
Lane 3: NIH3T3 cell lysate (20 µg)
Lane 4: HeLa cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab111318 observed at 140 kDa. Red - loading control, ab8245, observed at 37 kDa.
ab111318 was shown to recognize HDAC4 when HDAC4 knockout samples were used, along with additional cross-reactive bands. Wild-type and HDAC4 knockout samples were subjected to SDS-PAGE. ab111318 and ab8245 (loading control to GAPDH) were both diluted 1 µg/ml 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 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-HDAC4 antibody (ab111318)

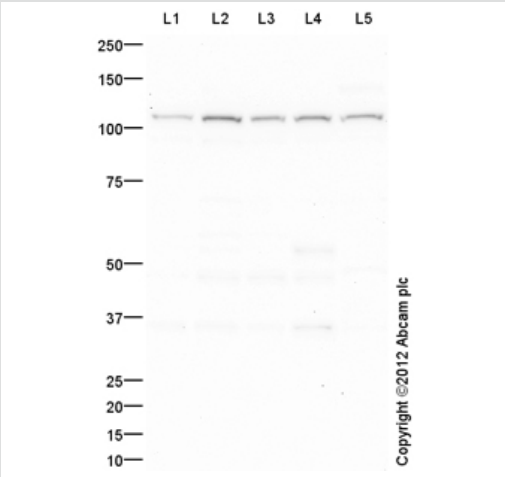
ICC/IF image of ab111318 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab111318 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (ab96899) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunocytochemistry/ Immunofluorescence - Anti-HDAC4 antibody (ab111318)

Image courtesy of an Abreview submitted by Dr. Kirk McManus, Univ. of Manitoba/Cancer Care MICB, Canada.

ab111318 (1/200) staining HDAC4 in HeLa cells (green). Cells were fixed in paraformaldehyde, permeabilised in 0.5% Triton X-100/PBS and counterstained with DAPI in order to highlight the nucleus (red). For further experimental details please refer to Abreview.



Western blot - Anti-HDAC4 antibody (ab111318)

All lanes : Anti-HDAC4 antibody (ab111318) at 1 µg/ml (Milk blocking - 3%)

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate
Lane 3 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate
Lane 4 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate
Lane 5 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate

Lysates/proteins at 25 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 119 kDa
Observed band size: 119 kDa

Exposure time: 12 minutes

Abcam recommends using milk as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.

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