abcam

Product datasheet

Anti-HDAC7 (phospho S155) antibody ab111390

2 Images

Overview

Product name	Anti-HDAC7 (phospho S155) antibody
Description	Rabbit polyclonal to HDAC7 (phospho S155)
Host species	Rabbit
Specificity	ab111390 detects endogenous levels of HDAC7A only when phosphorylated at serine 155.
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic phosphopeptide derived from Human HDAC7A around the phosphorylation site of Serine 155 (T-V-S^{p}-E-P).
Positive control	HeLa cell extracts. IF/ICC: HepG2 cell line.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 49.1% PBS, 50% Glycerol, 0.88% Sodium chloride Note: PBS (without Mg2+ and Ca2+)
Purity	Immunogen affinity purified
Purification notes	ab111390 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab111390** in the following tested applications.

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

Application	Abreviews	Notes
WB		1/500 - 1/1000. Predicted molecular weight: 103 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		Use a concentration of 1 µg/ml.

Target

Function

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 by repressing transcription of myocyte enhancer factors such as MEF2A, MEF2B and MEF2C. During muscle differentiation, it shuttles into the cytoplasm, allowing the expression of myocyte enhancer factors (By similarity). May be involved in Epstein-Barr virus (EBV) latency, possibly by repressing the viral BZLF1 gene.

Sequence similarities

Belongs to the histone deacetylase family. HD type 2 subfamily.

Domain

The nuclear export sequence mediates the shuttling between the nucleus and the cytoplasm.

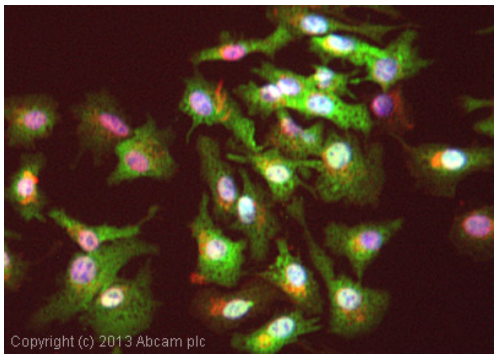
Post-translational modifications

May be phosphorylated by CaMK1. Phosphorylated by the PKC kinases PKN1 and PKN2, impairing nuclear import.

Cellular localization

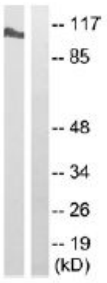
Nucleus. Cytoplasm. In the nucleus, it associates with distinct subnuclear dot-like structures. Shuttles between the nucleus and the cytoplasm. Treatment with EDN1 results in shuttling from the nucleus to the perinuclear region. The export to cytoplasm depends on the interaction with the 14-3-3 protein YWHAE and may be due to its phosphorylation.

Images



Immunocytochemistry/ Immunofluorescence - Anti-HDAC7 (phospho S155) antibody (ab111390)

ICC/IF image of ab111390 stained HepG2 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 (ab111390, 1µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit 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.



Western blot - Anti-HDAC7 (phospho S155) antibody (ab111390)

All lanes : Anti-HDAC7 (phospho S155) antibody (ab111390) at 1/500 dilution

Lane 1 : HeLa cell extract

Lane 2 : HeLa cell extract with immunizing phosphopeptide at 10 µg

Lysates/proteins at 30 µg per lane.

Predicted band size: 103 kDa

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