

Product datasheet

Anti-HDAC4 + 5 + 9 antibody ab131524

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Overview

Product name	Anti-HDAC4 + 5 + 9 antibody
Description	Rabbit polyclonal to HDAC4 + 5 + 9
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide corresponding to amino acids around 244-248/257-261/218-222 of Human HDAC4 + 5 + 9 (NP_006028.2 NP_001015053.1 NP_055522.1) Run BLAST with Expasy Run BLAST with NCBI
Positive control	Methanol-fixed HeLa cells, 293 and HeLa cell lysates, Human lung carcinoma tissue
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 49% PBS, 0.88% Sodium chloride, 50% Glycerol (glycerin, glycerine)
Purity	PBS without Mg ²⁺ and Ca ²⁺
Clonality	Immunogen affinity purified
Isotype	Polyclonal
	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab131524 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: 119, 122, 111 kDa.
IHC-P	★★★★★ (1)	1/50 - 1/100.
ICC/IF		1/100 - 1/200.

Target

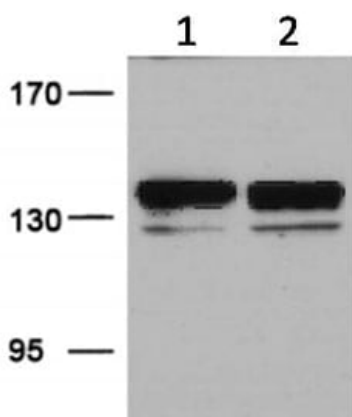
Relevance

HDAC4 is 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. HDAC5: 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 MEF2C. During muscle differentiation, it shuttles into the cytoplasm, allowing the expression of myocyte enhancer factors. HDAC9: 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. Represses MEF2-dependent transcription. Isoform 3 lacks active site residues and therefore is catalytically inactive. Represses MEF2-dependent transcription by recruiting HDAC1 and/or HDAC3. Seems to inhibit skeletal myogenesis and to be involved in heart development. Protects neurons from apoptosis, both by inhibiting JUN phosphorylation by MAPK10 and by repressing JUN transcription via HDAC1 recruitment to JUN promoter.

Cellular localization

HDAC4: Nucleus. Cytoplasm. Note: 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 and SIK1. The nuclear localization probably depends on sumoylation. HDAC5: Nucleus. Cytoplasm. Note: Shuttles between the nucleus and the cytoplasm. In muscle cells, it shuttles into the cytoplasm during myocyte differentiation. The export to cytoplasm depends on the interaction with a 14-3-3 chaperone protein and is due to its phosphorylation at Ser-259 and Ser-498 by AMPK, CaMK1 and SIK1. HDAC9: Nucleus

Images



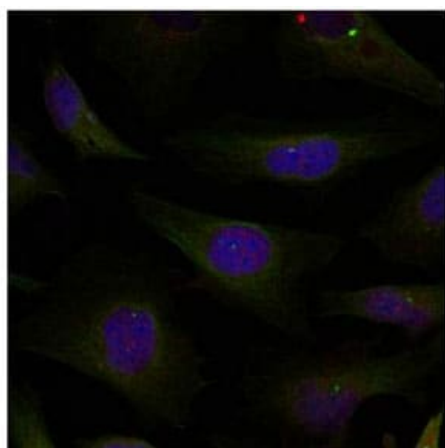
Western blot - Anti-HDAC4 + 5 + 9 antibody (ab131524)

All lanes : Anti-HDAC4 + 5 + 9 antibody (ab131524) at 1/500 dilution

Lane 1 : 293 cell lysate

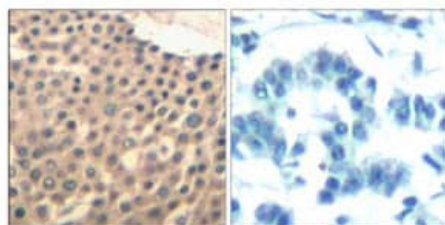
Lane 2 : HeLa cell lysate

Predicted band size: 119, 122, 111 kDa



Immunocytochemistry/ Immunofluorescence - Anti-HDAC4 + 5 + 9 antibody (ab131524)

Immunofluorescence analysis of methanol-fixed HeLa cells labelled with ab131524 at 1/100 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC4 + 5 + 9 antibody (ab131524)

Immunohistochemical analysis of paraffin embedded Human lung carcinoma tissue labelled with ab131524 at 1/50 dilution (left) or the same antibody preincubated with blocking peptide (right).

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

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