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HDAC4 (N-terminus) Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP53277

Product Information

Application	WB, IP
Primary Accession	P56524
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	119040

Additional Information

Gene ID	9759
Other Names	EC 3.5.1.98;HA6116;HD 4;HD4;HDAC 4;HDAC A;HDAC4;HDAC4_HUMAN;HDACA;Histone Deacetylase 4; Histone Deacetylase A;KIAA0288.
Dilution	WB~~1:1000 IP~~1:500
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	HDAC4 (HGNC:14063)
Synonyms	KIAA0288
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 via its interaction with the myocyte enhancer factors such as MEF2A, MEF2C and MEF2D. Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer. Deacetylates HSPA1A and HSPA1B at 'Lys-77' leading to their preferential binding to co-chaperone STUB1 (PubMed:27708256). Nucleus. Cytoplasm. Note=Shuttles between the nucleus and the cytoplasm.

Cellular Location	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 Interaction with SIK3 leads to HDAC4 retention in the cytoplasm (By similarity). {ECO:0000250|UniProtKB:Q6NZM9}
Tissue Location	Ubiquitous.

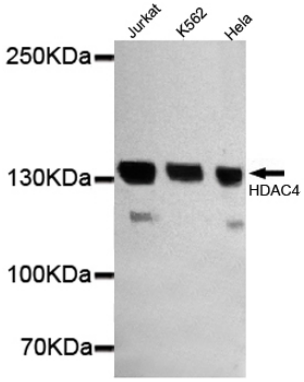
Background

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. Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer.

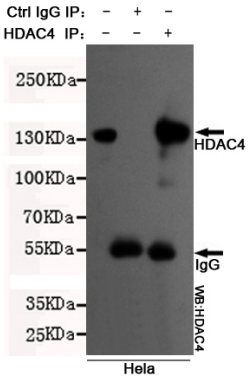
References

Grozinger C.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 96:4868-4873(1999).
Ohara O.,et al.DNA Res. 4:53-59(1997).
Ohara O.,et al.Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 434:724-731(2005).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



Western blot detection of HDAC4 in Jurkat,Hela and K562 cell lysates using HDAC4 mouse mAb (1:1000 diluted).Predicted band size: 140KDa.Observed band size: 140KDa.



Immunoprecipitation analysis of Hela cell lysates using HDAC4 mouse mAb.