10320 Camino Santa Fe, Suite G
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HDAC4 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO2129a

Specification

HDAC4 Antibody - Product Information

Application	**E, WB, FC, IHC**
Primary Accession	P56524
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**119kDa KDa**

Description
Histones play a critical role in transcriptional regulation, cell cycle progression, and developmental events. Histone acetylation/deacetylation alters chromosome structure and affects transcription factor access to DNA. The protein encoded by this gene belongs to class II of the histone deacetylase/acuc/apha family. It possesses histone deacetylase activity and represses transcription when tethered to a promoter. This protein does not bind DNA directly, but through transcription factors MEF2C and MEF2D. It seems to interact in a multiprotein complex with RbAp48 and HDAC3.

Immunogen
Purified recombinant fragment of human HDAC4 (AA: 456-592) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

HDAC4 Antibody - Additional Information

Gene ID 9759

Other Names
Histone deacetylase 4, HD4, 3.5.1.98, HDAC4, KIAA0288

Dilution
E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400
IHC~~1/200 - 1/400

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
HDAC4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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HDAC4 Antibody - 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).

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

Tissue Location
Ubiquitous.

HDAC4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture