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HDAC4 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10449

Specification

HDAC4 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P56524
Other Accession	NP_006028
Reactivity	**Human, Chicken**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**119040**

HDAC4 Antibody - Additional Information

Gene ID 9759

Application & Usage	**Western blotting (0.5-4 µg/ml) and Immunohistochemistry (5 µg/ml). However, the optimal conditions should be determined individually. The antibody detects ~140 kDa human HDAC-4. Reactivity to other species has not been determined.**

Other Names
HDAC4 , HD4 , HDAC-A, KIAA0288 , HDACA , HA6116

Target/Specificity
HDAC4

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.2 mg/ml) affinity purified rabbit anti-HDAC4 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

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

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

HDAC4 Antibody - Images

HDAC4 Antibody - Background

HDAC4 is a member of the class II mammalian histone deacetylases, which consists of 1084 amino acid residues. Its C-terminal sequence is highly similar to the deacetylase domain of yeast HDA1. HDAC4, unlike other deacetylases, shuttles between the nucleus and cytoplasm in a process involving active nuclear export. Association of HDAC4 with 14-3-3 results in sequestration of HDAC 4 protein in the cytoplasm. In the nucleus, HDAC4 associates with the myocyte enhancer factor MEF2A. Binding of HDAC4 to MEF2A results in the repression of MEF2A transcriptional activation.

HDAC4 has also been shown to interact with other deacetylases such as HDAC3 as well as the corepressors NcoR and SMART.