

Product datasheet for **TA346963**

HDAC4 Mouse Monoclonal Antibody [Clone ID: 4A3-H7-C6]

Product data:

Product Type:	Primary Antibodies
Clone Name:	4A3-H7-C6
Applications:	IP, WB
Recommended Dilution:	WB: 1:1000
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	The immunogen for HDAC4 antibody: purified recombinant human HDAC4 protein fragments expressed in E.coli
Formulation:	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.02% sodium azide, 50% glycerol
Purification:	Affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	140 kDa
Gene Name:	histone deacetylase 4
Database Link:	NP_006028 Entrez Gene 9759 Human P56524



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Background:

Cytoplasm Chromatin is a highly specialized structure composed of tightly compacted chromosomal DNA. Gene expression within the nucleus is controlled, in part, by a host of protein complexes which continuously pack and unpack the chromosomal DNA. One of the known mechanisms of this packing and unpacking process involves the acetylation and deacetylation of the histone proteins comprising the nucleosomal core. Acetylated histone proteins confer accessibility of the DNA template to the transcriptional machinery for expression. Histone deacetylases (HDACs) are chromatin remodeling factors that deacetylate histone proteins and thus, may act as transcriptional repressors. HDACs are classified by their sequence homology to the yeast HDACs and there are currently 2 classes. Class I proteins are related to Rpd3 and members of class II resemble Hda1p. HDAC4 is a class II histone deacetylase containing 1084 amino acid residues. HDAC4 has been shown to interact with NCoR. 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 HDAC4 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.

Synonyms:

AHO3; BDMR; HA6116; HD4; HDAC-4; HDAC-A; HDACA

Protein Families:

Druggable Genome, Transcription Factors