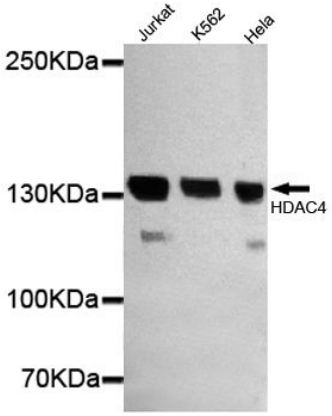
HDAC4(N-term)

Mouse monoclonal Antibody

#53580

Catalog Number: 53580
Amount: 100μg/100μl
Swiss-Prot No. :P56524
Gene name:hdac4
Gene id:9759
Clone Number： 4A3-H7-C6
Form of Antibody: Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50%,glycerol
Storage/Stability: Store at -20℃/1 year
Immunogen: Purified recombinant human HDAC4 protein fragments expressed in E.coil.
Purification: affinity-chromatography
Specificity/Sensitivity: This antibody detects endogenous levels of HDAC4 and does not corss-react with related proteins
Reactivity: Human,Mouse,Rat
Applications:
Predicted MW: 140 kd WB: 1:1000



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.

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 Iproteins 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.