

Datasheet for ABIN2669629

HDAC4 Protein (AA 645-1057, Catalytic Domain)[Go to Product page](#)**1** Image

Overview

Quantity:	100 µg
Target:	HDAC4
Protein Characteristics:	Catalytic Domain, AA 645-1057
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Enzyme Activity Assay (EAA)

Product Details

Characteristics:	HDAC4 is a Class II histone deacetylase with broad substrate specificity. The catalytic domain corresponding to amino acids 645 - 1057 of HDAC4 (accession number NP_006028.2) was expressed in E. coli with an apparent molecular weight of 45 kDa. An epitope tag present during expression was removed proteolytically after purification.
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Target Details

Target:	HDAC4
Alternative Name:	HDAC4 (HDAC4 Products)
Background:	HDAC4 (Histone Deacetylase 4) is a member of the class IIa mammalian histone deacetylases (HDACs) involved in regulating chromatin structure during transcription. These enzymes catalyze the removal of acetyl groups from lysine residues of histones and other cellular

Target Details

proteins. Lysine N-ε-acetylation is a dynamic, reversible and tightly regulated protein and histone modification that plays a major role in regulation of gene expression in various cellular functions. It consists of the transfer of an acetyl moiety from an acetyl coenzyme A to the ε-amino group of a lysine residue. In vivo, acetylation is controlled by the antagonistic activities of histone acetyltransferases (HATs) and histone deacetylases (HDACs). The HDACs are grouped into four classes, on the basis of similarity to yeast counterparts: HDAC class I (HDAC1, HDAC2, HDAC3 and HDAC8), class II (HDAC4, HDAC5, HDAC6, HDAC7, HDAC9 and 10), class III (SIRT1-7) and class IV (HDAC11). Unlike other deacetylases, HDAC4 shuttles between the nucleus and cytoplasm and serves as a nuclear co-repressor that regulates bone and muscle development. HDAC4 interacts with the myocyte enhancer factors Mef2a, Mef2c and Mef2d. It also forms part of a multi-protein complex with RbAp48 and HDAC3. HDAC4 is ubiquitous.

Molecular Weight:	45 kDa
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Pathways:	Regulation of Muscle Cell Differentiation , Skeletal Muscle Fiber Development , Regulation of Carbohydrate Metabolic Process
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Application Details

Application Notes:	Recombinant HDAC4 is suitable for use in histone deacetylase (HDAC) assays. A good starting point is 2 to 5 ng of enzyme per assay.
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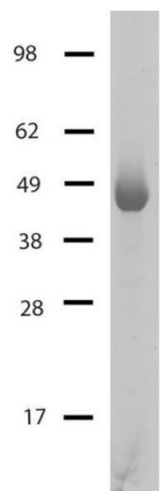
Restrictions:	For Research Use only
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Handling

Handling Advice:	Avoid repeated freeze/thaw cycles and keep on ice when not in storage.
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Storage:	-80 °C
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Storage Comment:	Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation.
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Western Blotting

Image 1. HDAC4 protein gel. HDAC4 run on an SDS-PAGE gel and stained with Coomassie blue.