

Human HDAC4 Protein (aa 612-1084)

Catalog Number: 11807-HNCB



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

AHO3; BDMR; HA6116; HD4; HDAC-4; HDAC-A; HDACA; 4932408F19Rik; AI047285

Protein Construction:

A DNA sequence encoding the human HDAC4 (Met612-Leu1084) was expressed and purified with two additional amino acids (Gly & Pro) at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The secreted recombinant human HDAC4 consists of 475 amino acids and predicts a molecular mass of 50.9 KDa. The apparent molecular mass of the protein is approximately 51 KDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

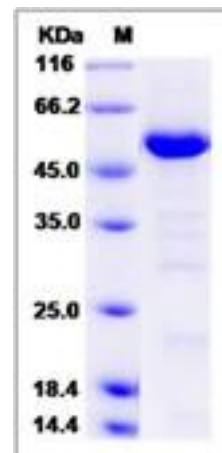
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

HDAC4 (histone deacetylase 4), belongs to class II of the histone deacetylase/acuc/apha family. Histone Deacetylases (HDACs) are a group of enzymes closely related to sirtuins. They catalyze the removal of acetyl groups from lysine residues in histones and non-histone proteins, resulting in transcriptional repression. In general, they do not act autonomously but as components of large multiprotein complexes, such as pRb-E2F and mSin3A, that mediate important transcription regulatory pathways. There are three classes of HDACs; classes 1, 2 and 4, which are closely related Zn²⁺-dependent enzymes. HDACs are ubiquitously expressed and they can exist in the nucleus or cytosol. Their subcellular localization is effected by protein-protein interactions and by the class to which they belong. HDACs have a role in cell growth arrest, differentiation and death and this has led to substantial interest in HDAC inhibitors as possible antineoplastic agents. HDAC4 possesses histone deacetylase activity and represses transcription when tethered to a promoter. It does not bind DNA directly, but through transcription factors MEF2C and MEF2D. HDAC4 seems to interact in a multiprotein complex with RbAp48 and HDAC3.

References

1. Geng H, *et al.* (2011) HDAC4 protein regulates HIF1α protein lysine acetylation and cancer cell response to hypoxia. *J Biol Chem.* 286(44):38095-102.
2. Yuan JH, *et al.* (2011) The histone deacetylase 4/SP1/miR-200a regulatory network contributes to aberrant histone acetylation in hepatocellular carcinoma. *Hepatology.* 54(6):2025-35.
3. Cernotta N, *et al.* (2011) Ubiquitin-dependent degradation of HDAC4, a new regulator of random cell motility. *Mol Biol Cell.* 22(2):278-89.

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