

Product datasheet

Recombinant human HDAC5 protein ab80351

Overview

Product name	Recombinant human HDAC5 protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	Baculovirus
Amino Acid Sequence	
Accession	Q9UQL6
Species	Human
Molecular weight	51 kDa
Amino acids	656 to 1122
Tags	His tag C-Terminus

Specifications

Our [Abpromise guarantee](#) covers the use of **ab80351** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity	<p>Specific Activity: ≥ 1000 pmol/min/μg.</p> <p>Unit Definition: One U = 1 pmol of acetyl group removed/min/μg of enzyme.</p> <p>Assay Conditions:</p> <p>25 mM Tris HCl, pH 8.0, 137 mM NaCl, 2.7 mM KCl, 1 mM MgCl₂, and 0.1 mg/ml BSA, 30 μM HDAC class 2a substrate, and HDAC5. Incubation condition: 30 min at 30°C, followed by HDAC developer for 15 min at room temperature. Fluorescence intensity is measured at ex360/em460.</p>
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Applications	SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	<p>Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.</p> <p>pH: 8.00</p>
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Constituents: 0.79% Tris HCl, 10% Glycerol, 0.8004% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

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 by repressing transcription of myocyte enhancer MEF2C. During muscle differentiation, it shuttles into the cytoplasm, allowing the expression of myocyte enhancer factors.
Tissue specificity	Ubiquitous.
Sequence similarities	Belongs to the histone deacetylase family. HD type 2 subfamily.
Domain	The nuclear export sequence mediates the shuttling between the nucleus and the cytoplasm.
Post-translational modifications	Phosphorylated by CaMK at Ser-259 and Ser-498. The phosphorylation is required for the export to the cytoplasm. Phosphorylated by the PKC kinases PKN1 and PKN2, impairing nuclear import. Ubiquitinated. Polyubiquitination however does not lead to its degradation.
Cellular localization	Nucleus. Cytoplasm. Shuttles between the nucleus and the cytoplasm. In muscle cells, it shuttles into the cytoplasm during myocyte differentiation. The export to cytoplasm depends on the interaction with a 14-3-3 chaperone protein and is due to its phosphorylation at Ser-259 and Ser-498 by CaMK.

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