

Product Information



HDAC5 (human recombinant)

Item No. 10009379 • Batch No. XXXXXX

Synonyms:	Histone Deacetylase 5
Source:	10 µg of recombinant C-terminal His-tagged protein expressed in baculovirus expression system
Amino Acids:	657-1,123
GenBank Accession No.:	NM_005474
M_r:	51 kDa
Purity:	<i>batch specific</i>
Stability:	≥6 months at -80°C; avoid freeze/thaw cycles by aliquoting protein.
Supplied as:	10 µg of HDAC5 in <i>batch specific</i> buffer
Specific Activity:	<i>batch specific</i>
Protein Concentration:	<i>batch specific</i> mg/ml

Laboratory Procedures

Histone deacetylases (HDACs) catalyze the deacetylation of core histones, resulting in tightening of nucleosomal integrity, restriction of the access of transcription factors, and suppression of transcription. HDACs also play an important role in mediating nuclear receptor functions by forming co-repressor complexes with nuclear receptors in the absence of ligands. They are also involved in mediating other transcription regulatory pathways by associating with transcription factors, such as E2F, TFIIE, TFIIF, NF-κB, p300, Stat3, p53, and the retinoblastoma (Rb) protein.¹

HDAC5 is a Class IIa HDAC which is homologous to yeast Hda 1 and is larger in size than the other two classes of HDACs.^{1,2} Class IIa HDACs contain a highly conserved C-terminal deacetylase catalytic domain (~420 amino acids) and an N-terminal domain with no similarity to HDACs in other classes. Class IIa HDACs can shuttle between the nucleus and cytoplasm, suggesting potential extranuclear functions by regulating the acetylation status of non-histone substrates. By modifying chromatin structure and other non-histone proteins, HDACs play important roles in controlling complex biological events, including cell development, differentiation, programmed cell death, angiogenesis, and inflammation. Considering these major roles, it is conceivable that dysregulation of HDACs and subsequent imbalance of acetylation and deacetylation may be involved in the pathogenesis of various diseases, including cancer and inflammatory diseases.²

References

1. Lin, H.-Y., Chen, C.-S., Lin, S.-P., *et al.* Targeting histone deacetylase in cancer therapy. *Medicinal Research Reviews* **26(4)**, 397-413 (2006).
2. Huang, L. Targeting histone deacetylases for the treatment of cancer and inflammatory diseases. *J. Cell. Physiol.* **39.1**, 611-616 (2006).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009379

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 11/18/2013

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com