



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# PRODUCT INFORMATION



## HDAC5 (human, recombinant)

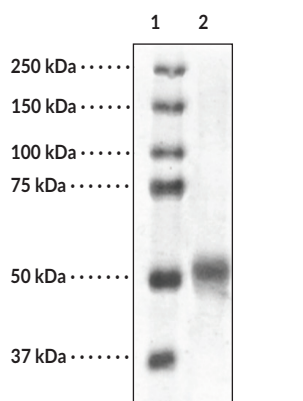
Item No. 10009379

### Overview and Properties

<b>Synonyms:</b>	Histone Deacetylase 5
<b>Source:</b>	10 µg of recombinant C-terminal His-tagged protein expressed in baculovirus expression system
<b>Amino Acids:</b>	656-1,122
<b>Uniprot No.:</b>	Q9UQL6
<b>Molecular Weight:</b>	51 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥6 months
<b>Purity:</b>	<i>batch specific</i> (≥90% estimated by SDS-PAGE)
<b>Supplied in:</b>	45 mM Tris-HCl, pH 8.0, 124 mM NaCl, 2.4 mM KCl, 225 imidazole, and 10% glycerol
<b>Endotoxin Testing:</b>	<1.0 EU/µg, determined by the LAL endotoxin assay
<b>Protein Concentration:</b>	<i>batch specific</i> mg/ml
<b>Activity:</b>	<i>batch specific</i> U/ml
<b>Specific Activity:</b>	<i>batch specific</i> U/mg
<b>Unit Definition:</b>	One unit is the amount of enzyme required to release 1 pmol of acetate per minute at 37°C in 25 mM Tris/HCl, pH 8.0, 137 mM NaCl, 2.7 mM KCl, 1 mM MgCl <sub>2</sub> , 0.1 mg/ml BSA, and 20 µM fluorogenic HDAC class 2a substrate.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

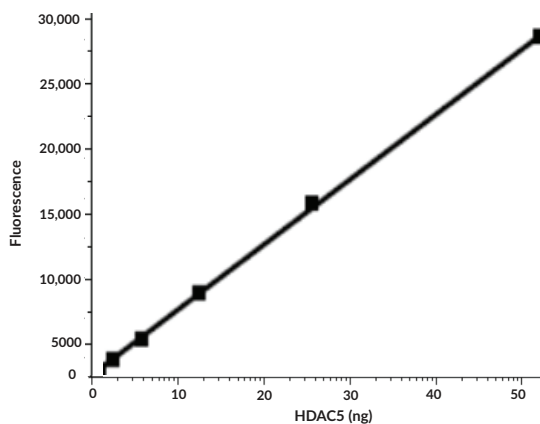
### Images



Lane 1: MW Markers  
Lane 2: HDAC5 (3 µg)

SDS-PAGE Analysis of HDAC5.

Representative gel image shown; actual purity may vary between each batch.



HDAC5 Deacetylase Activity

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. 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  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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# PRODUCT INFORMATION



## Description

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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, TFIIIF, NF- $\kappa$ B, p300, Stat3, p53, and the retinoblastoma (Rb) protein.<sup>1</sup> 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.<sup>1,2</sup> 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.<sup>2</sup>

## References

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1. Lin, H.Y., Chen, C.S., Lin, S.P., *et al.* Targeting histone deacetylase in cancer therapy. *Med. Res. Rev.* **26(4)**, 397-413 (2006).
2. Huang, L. Targeting histone deacetylases for the treatment of cancer and inflammatory diseases. *J. Cell. Physiol.* **209(3)**, 611-616 (2006).

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