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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

HDAC4 (human, recombinant)

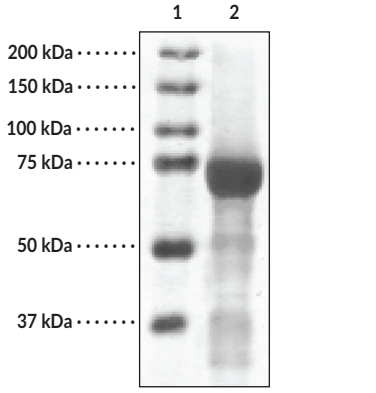
Item No. 10009652

Overview and Properties

Synonym:	Histone Deacetylase 4
Source:	10 µg of active recombinant N-terminal GST-tagged protein expressed in baculovirus expression system
Amino Acids:	627-1,085
Uniprot No.:	P56524
Molecular Weight:	75.2 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	***batch specific*** (≥60% estimated by SDS-PAGE)
Supplied in:	45 mM Tris-HCl, pH 8.0, with 124 mM NaCl, 2.4 mM KCl, 18 mM glutathione, and 10% glycerol
Protein Concentration:	***batch specific*** mg/ml
Activity:	***batch specific*** U/ml
Specific Activity:	***batch specific*** U/mg
Unit Definition:	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 $MgCl_2$, 0.1 mg/ml BSA, and 20 µM fluorogenic HDAC class 2a substrate.

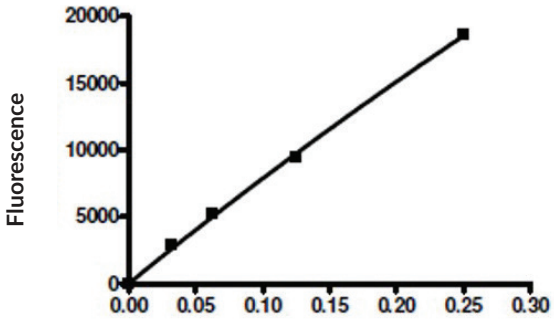
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: HDAC4 (5 µg)

SDS-PAGE Analysis of HDAC4



HDAC4 Deacetylase Activity

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PRODUCT INFORMATION

Description

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 important roles 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-kB, p300, Stat3, p53, and the retinoblastoma (Rb) protein.[1]

HDAC4 is a Class IIa HDAC which is homologous to yeast Hda 1 and is larger in size than the other two classes of HDACs. 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.[1,2] Class II HDACs can shuttle between the nucleus and cytoplasm, suggesting potential extranuclear functions by regulating the acetylation status of nonhistone substrates. By modifying chromatin structure and other nonhistone 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.

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).

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