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Produktinformation



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Zuschläge

- Mindermengenzuschlag
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PRODUCT INFORMATION



HDAC7 (human, recombinant)

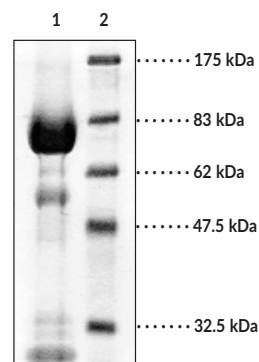
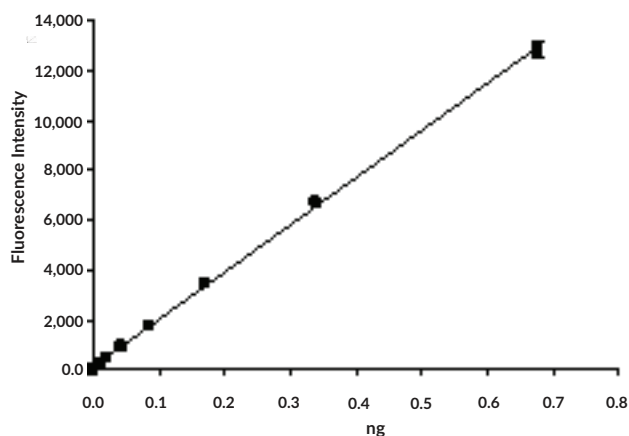
Item No. 42084

Overview and Properties

Synonym: Histone Deacetylase 7
Source: Active recombinant human N-terminal GST-tagged HDAC7 expressed in insect cells
Amino Acids: 518-952
Uniprot No.: Q8WUI4
Molecular Weight: 78 kDa
Storage: -80°C (as supplied)
Stability: ≥6 months
Purity: ≥56% estimated by SDS-PAGE
Supplied in: 40 mM Tris-HCl, pH 8.0, 250 mM sodium chloride, and 20% glycerol
Protein
Concentration: *batch specific* mg/ml
Activity: *batch specific* U/ml
Specific Activity: *batch specific* U/mg

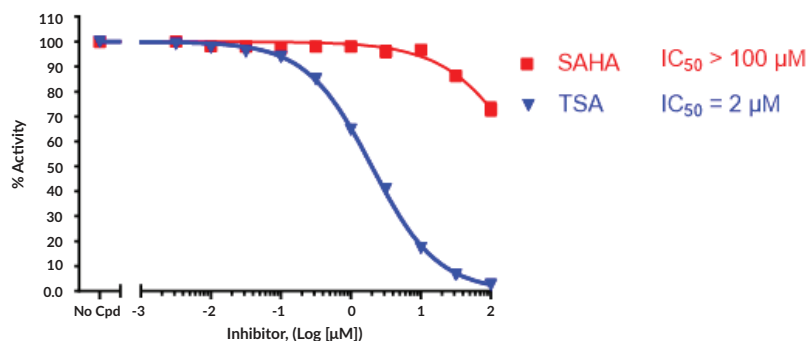
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: HDAC7 (5 µg)
Lane 2: MW Markers

SDS-PAGE Analysis of HDAC7.



HDAC7 inhibition curves using fluorogenic assay. Representative data only; data may vary by lot.

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
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PRODUCT INFORMATION



Description

Histone deacetylase 7 (HDAC7) is a zinc-dependent metalloenzyme and class IIa HDAC.¹ It is composed of an N-terminal regulatory domain, which contains a myocyte-specific enhancer factor 2 (MEF2) binding site, three 14-3-3 binding sites, and a nuclear localization signal, a catalytic domain, and a C-terminal domain that contains a nuclear export signal.¹ HDAC7 shuttles between the cytoplasm, mitochondria, and nucleus and is expressed in the heart, placenta, pancreas, lungs, and skeletal muscle.^{2,3} It acts as a transcriptional corepressor and has many binding partners, including MEF2, nuclear receptor co-repressor (NCOR), and hypoxia-inducible factor-1 α (HIF-1 α), and its enzymatic activity is dependent on association with HDAC3.¹ HDAC7 is involved in immunity, angiogenesis, embryonic development, muscle cell differentiation, and apoptosis.^{1,3,4} Knockdown of *HDAC7* inhibits sphere formation of breast cancer stem cells (CSCs) *in vitro*.⁵ *Hdac7*^{-/-} is embryonic lethal and induces hemorrhages, pericardial effusion, and enlarged dorsal aortae in mice.⁶ Expression of *HDAC7* is increased in patients with various cancers and is associated with poor prognosis.⁴ Cayman's HDAC7 (human, recombinant) protein can be used for enzyme activity assays.

References

1. Yang, X.J. and Grégoire, S. Class II histone deacetylases: From sequence to function, regulation, and clinical implication. *Mol. Cell. Biol.* **25(8)**, 2873-2884 (2005).
2. Fischle, W., Dequiedt, F., Fillion, M., *et al.* Human HDAC7 histone deacetylase activity is associated with HDAC3 *in vivo*. *J. Biol. Chem.* **276(38)**, 35826-35835 (2001).
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4. Liu, C., Zheng, D., Pu, X., *et al.* HDAC7: A promising target in cancer. *Front. Oncol.* **14**, 1327933 (2024).
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6. Chang, S., Young, B.D., Li, S., *et al.* Histone deacetylase 7 maintains vascular integrity by repressing matrix metalloproteinase 10. *Cell* **126(2)**, 321-334 (2006).

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