PRODUCT INFORMATION

HDAC9 (human, recombinant)

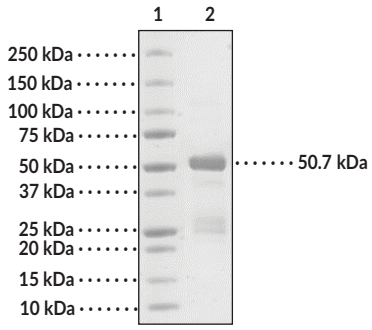
Item No. 10009466

Overview and Properties

Synonyms:	Histone Deacetylase 9
Source:	10 µg of recombinant C-terminal His-tagged protein expressed in baculovirus expression system
Amino Acids:	604-1066
Molecular Weight:	50.7 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	≥75% estimated by SDS-PAGE
Supplied in:	40 mM Tris-HCl, pH 8.0, with 110 mM sodium chloride, 2.2 mM potassium chloride, 20% glycerol, and 200 mM imidazole
Protein Concentration:	***batch specific*** mg/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 sodium chloride, 2.7 mM potassium chloride, 1 mM magnesium chloride, 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.

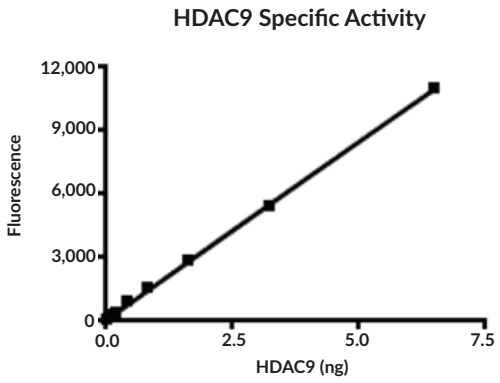
Images



Lane 1: MW Markers
Lane 2: HDAC9 (3.15 µg)

SDS-PAGE Analysis of HDAC9.

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



HDAC9 Deacetylase Activity

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Description

HDAC9 is a Class IIa HDAC which is homologous to the yeast HDAC1 and is larger in size than the other classes of HDACs.[1,2] Class IIa HDACs contain a highly conserved C-terminal deacetylase catalytic domain (~420 amino acids) and N-terminal domain with no similarity to HDACs in other classes. Class II HDACs can shuttle between the nucleus and cytoplasm, suggesting possible extranuclear functions including regulating the acetylation status of non-histone substrates. By modifying chromatin structure and other non-histone proteins, HDACs play an important role in controlling complex biological events, including cell development, differentiation, programmed cell death, angiogenesis, and inflammation.[1,2] 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. *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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