



HDAC1 (C-Terminus HIS-FLAG tag). Sf9 cells Active Enzyme

BACKGROUND

Acetylation of the tail of histone is known to cause chromatin to adopt a more 'open' 3D conformation, allowing trans factors greater access to DNA. Histone acetyltransferases (HATs), complexes interact with sequence-specific activator proteins and target specific genes. In addition to histones, HATs acetylate non-histone proteins, implicating them in a wide variety of regulatory roles for these enzymes. By comparison, histone deacetylation promotes a more 'closed' chromatin conformation and in general leads to repression of gene activity. Mammalian histone deacetylases are divided into three classes on the basis of their similarity to various the yeast deacetylases. Class I (HDACs 1, 2, 3 and 8) related to the yeast Rpd3-like proteins, class II (HDACs 4, 5, 6, 7, 9 and 10) related to yeast Hda1-like proteins and class III related to the yeast protein Sir2. Inhibitors of HDAC have enormous potential as cancer therapeutic agents.

ACTIVITY

Specific Activity: 390 pmol/min/ μ g.

PURITY

>98% by SDS-PAGE

APPLICATIONS

Useful for the study of enzyme kinetics, screening inhibitors and selectivity profiling.

ORDERING INFORMATION

CATALOG NUMBER

X1737E

SIZE

20 μ g

CUSTOMER STORAGE

Product should be stored at -80°C.
Aliquot to avoid freeze/thaw cycles

FORMULATION

Provided in 25 mM Tris-HCl, pH 8.0,
130 mM NaCl, 0.05% Tween-20,
100 μ g/ml FLAGpeptide and 10% glycerol.

SHIP CONDITIONS

Ship on dry ice, freeze upon arrival

STABILITY

Products are stable for one year from purchase when stored properly

CONCENTRATION

Lot specific, see vial

SOURCE

Baculovirus infected Sf9 cells

ASSAY METHODS

MATERIALS

Assay condition : 25 mM Tris/Cl, pH8.0,
137 mM NaCl, 2.7 mM KCl, 1 mM MgCl₂,
and 0.1 mg/ml BSA, 20 μM HDAC
substrate and 4ng/μl HDAC1.
Incubation condition: 30 min
at 37°C.

PROCEDURE

Step 1: Adding all reaction mixture to a low binding
NUNC black plate (VWR catalog
number 62408-936)
35 μl of HDAC assay buffer
5 μl of 1 mg/ml BSA
5 μl of 200 uM substrate
5.0 μl of HDAC1 (0.01 ug/ul)
Always add HDAC1 at the last.
Incubate at 37 °C for 30 min.

Step 2: Stop the reaction
Add 50 μl of HDAC assay developer
and incubate the plate at room temperature for 15
min.

Step 3: Read sample in a microtiter-plate reading
fluorimeter capable of excitation at a wavelength in the
range 350-380 nm and detection of
emitted light in the range 440-460 nm.

REFERENCES

PRODUCT SPECIFIC REFERENCES