

Recombinant HDAC9 protein

Catalog No: 31354
Expressed In: Baculovirus

Quantity: 10 µg
Concentration: 1.76 µg/µl
Source: Human

Buffer Contents: 10 µg recombinant HDAC9 supplied at a concentration of 1.76 µg/µl in a buffer of 40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 20 mM imidazole and 20% glycerol.

Background: HDAC9 (Histone Deacetylase 9) is a class II mammalian histone deacetylase (HDAC) involved in regulating chromatin structure during transcription. These enzymes catalyze the removal of acetyl groups from lysine residues of histones and other cellular proteins. Lysine N-ε-acetylation is a dynamic, reversible and tightly regulated protein and histone modification that plays a major role in regulation of gene expression in various cellular functions. It consists of the transfer of an acetyl moiety from an acetyl coenzyme A to the ε-amino group of a lysine residue.

In vivo, acetylation is controlled by the antagonistic activities of histone acetyltransferases (HATs) and histone deacetylases (HDACs). The HDACs are grouped into four classes, on the basis of similarity to yeast counterparts: HDAC class I (HDAC1, HDAC2, HDAC3 and HDAC8), class II (HDAC4, HDAC5, HDAC6, HDAC7, 9 and 10), class III (SIRT1-7) and class IV (HDAC11). In humans, expression of HDAC9 is expressed in a wide variety of tissues. It interacts with HDAC1, HDAC3, and probably with HDAC4 and HDAC5. It also interacts with CTBP1, MEF2, MAPK10, ETV6, NCOR1 and BCL6.

Protein Details: The C-terminal part of human HDAC9 (accession number NM_178423), amino acids 604-1066, was expressed with a C-terminal His tag (MW= 50.7 kDa) in a baculovirus expression system.

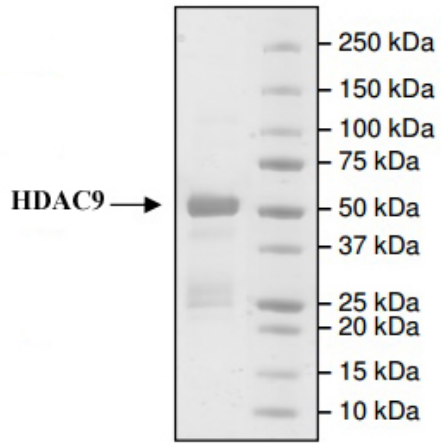
Application Notes: Recombinant HDAC9 protein is suitable for use in histone deacetylase assays. It can also be used to study enzyme kinetics, inhibitor screening, and selectivity profiling.

Specific Activity: 3070 pmol/min/µg.

Assay conditions: Prepare 25 mM Tris-HCl, pH 8.0, 137 mM NaCl, 2.7 mM KCl, 1 mM MgCl₂, 0.1 mg/ml BSA, 20 µM HDAC substrate and recombinant HDAC9 protein. Incubate for 30 minutes at 37°C followed by developing for 15 minutes at room temperature.

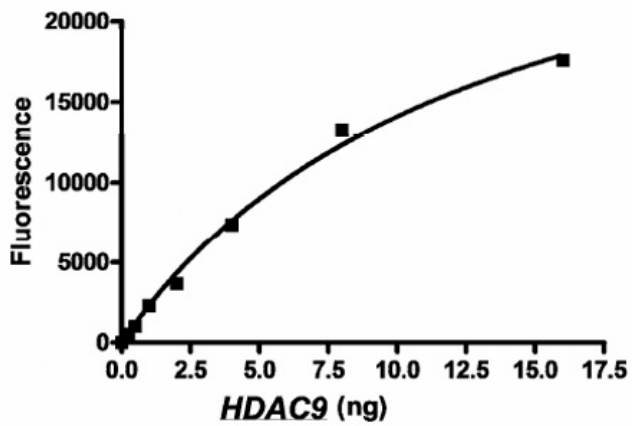
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



HDAC9 protein gel.

HDAC9 run on an SDS-PAGE gel and stained with Coomassie blue.



HDAC9 activity assay.

Recombinant HDAC9 activity measured using a fluorescent HDAC assay.