Recombinant HDAC8 protein, His-tag

Catalog No: 31566, 31966
Lot No: 32016001
Expressed In: Baculovirus

Quantity: 50, 1000 µg
Concentration: 0.6 µg/µl
Source: Human

Buffer Contents: Recombinant full length HDAC8 protein, His-tag is supplied at a concentration of 0.6 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 20% glycerol.

Background: HDAC8 (Histone Deacetylase 8) is a member of the class I mammalian histone deacetylases (HDACs) 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).

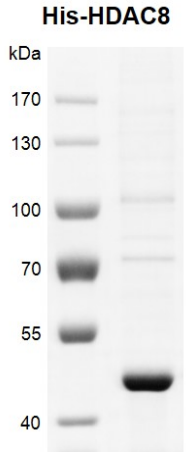
HDAC8 catalyzes the deacetylation of lysine residues in the histone N-terminal tails and represses transcription in large multiprotein complexes with transcriptional co-repressors. It also is involved in the deacetylation of cohesin complex protein SMC3 regulating release of cohesin complexes from chromatin. HDAC8 may play a role in smooth muscle cell contractility.

Protein Details: Recombinant human HDAC8 protein, His-tag was expressed in a baculovirus expression system as the full length protein (accession number NP_060956.1) with a C-terminal 6×His tag. The molecular weight of the protein is 43.8 kDa. The HDAC8 protein, His-tag is >90% pure by SDS-PAGE.

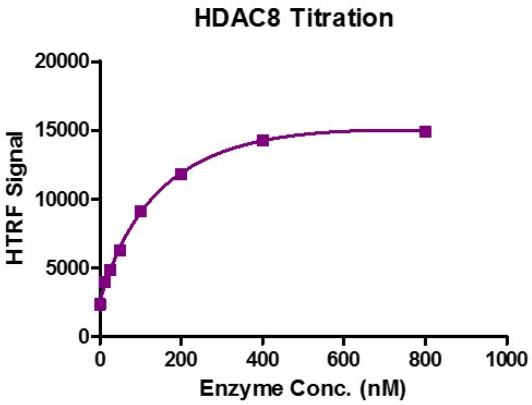
Application Notes: This protein is useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

HDAC Activity Assay Conditions:
3 µM Histone H3K9ac (1-21 aa) peptide was incubated with HDAC8 protein in reaction buffer including 25 mM Tris-HCl pH 8.0, 137 mM NaCl, 2.7 mM MgCl2, 1 mM KCl and 0.1 mg/ml BSA for 30 min at 37°C. HTRF assay was used for activity detection.

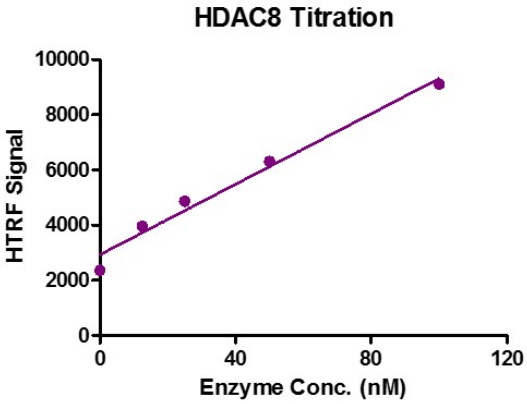
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product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



Recombinant HDAC8 His-tag protein gel.
HDAC8 protein was run on an 8% SDS-PAGE gel and stained with Coomassie Blue.



HTRF assay for HDAC8 protein, His-tag
3 µM Histone H3K9ac (1-21aa) peptide was incubated with HDAC8 protein, His-tag in reaction buffer for 30 min at 37°C, Reaction product was detected by Anti-H3K9me0-Eu antibody. HTRF assay was used for activity detection.



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