

## Recombinant HDAC4 (627-1084) protein

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**Catalog No:** 31527, 31927

**Lot No:** 17616001

**Expressed In:** Baculovirus

**Quantity:** 20 µg

**Concentration:** 0.2 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant HDAC4 (627-1084) protein is supplied at a concentration of 0.2 µg/µl in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% Glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

**Background:** HDAC4 (Histone Deacetylase 4) is a member of the class IIa 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).

Unlike other deacetylases, HDAC4 shuttles between the nucleus and cytoplasm and serves as a nuclear co-repressor that regulates bone and muscle development. HDAC4 interacts with the myocyte enhancer factors Mef2a, Mef2c and Mef2d. It also forms part of a multi-protein complex with RbAp48 and HDAC3. HDAC4 is ubiquitous.

**Protein Details:** Recombinant HDAC4 (627-1084) protein that includes amino acids 627-1084 of human HDAC4 protein (accession number NP\_006028.2) was expressed in Sf9 cells and contains an N-terminal FLAG tag with a molecular weight of 52.9 kDa. The purity of HDAC4 protein is >90% by SDS-PAGE.

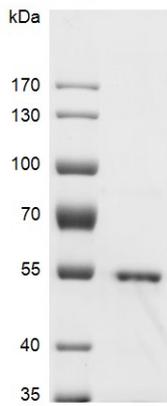
**Application Notes:** This protein is useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

**HDAC Activity Assay Conditions:** Assay was performed using HDAC-Glo™ Class IIa Assay from Promega. 3.5 µM substrate was incubated with HDAC4 proteins and 1/20000 developer reagent at room temperature, then luminescence was detected after incubation for 20 min.

**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.

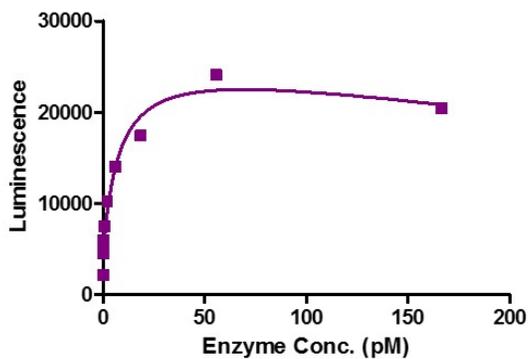
### HDAC4 (627-1084)



### Recombinant HDAC4 (627-1084) protein gel.

HDAC4 (627-1084) protein was run on an 8% SDS- PAGE gel and stained with Coomassie Blue.

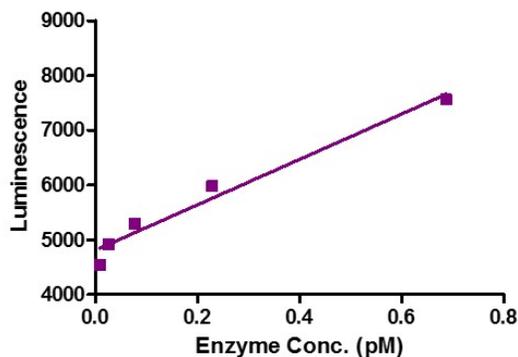
### HDAC4 (627-1084) Titration



### HDAC-Glo™ Class IIa Assay for HDAC4 activity

Assay was performed using HDAC-Glo™ Class IIa Assay from Promega. 3.5  $\mu$ M substrate was incubated with HDAC4 proteins and 1/20000 developer reagent at room temperature, then luminescence was detected after incubation for 20 min.

### HDAC4 (627-1084) Titration



### HDAC-Glo™ Class IIa Assay for HDAC4 activity

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