Active Recombinant Human HDAC3

CATALOG #: 7613-250 250 Units
7613-1000 1000 Units

LOT #: _____

SOURCE: Sf9 Insect Cells

PURITY: ~ 50 % by SDS-PAGE

SPECIFIC ACTIVITY: ≥ 0.5 U/µl

MOLECULAR WEIGHT: 51.1 kDa

FORM: rh-HDAC-3 is supplied with N-term His-tag as a liquid in 25 mM Tris, pH 7.5, 100 mM NaCl, 2.7 mM KCl, 3 mM $MgCl_2$, 10 % glycerol.

STORAGE CONDITIONS: Stable for 1 year at –70°C. Avoid multiple freeze/thaw cycles as activity may decrease.

BACKGROUND DESCRIPTION:

Human Histone Deacetylase 3 (HDAC3) is a member of the class I Histone Deacetylases. HDACs are important enzymes for the transcriptional regulation of gene expression in eukaryotic cells. HDACs catalyze the removal of acetyl groups from lysines near the N-termini of histones. Human HDACs have been implicated in a variety of human diseases such as cardiomyopathy, osteodystrophy, neurodegenerative disorders, aging and cancer. Like other class I and II HDAC members, the activity of HDAC3 is sensitive to HDAC inhibitor Trichostatin A (TSA).

APPLICATION AND USAGE:

Active HDAC3 is useful in studying enzyme regulation, determining target substrates, screening deacetylase inhibitors, or as a positive control in HDAC activity assays. We recommend using 1-5 unit/assay for analyzing HDAC3 activity.

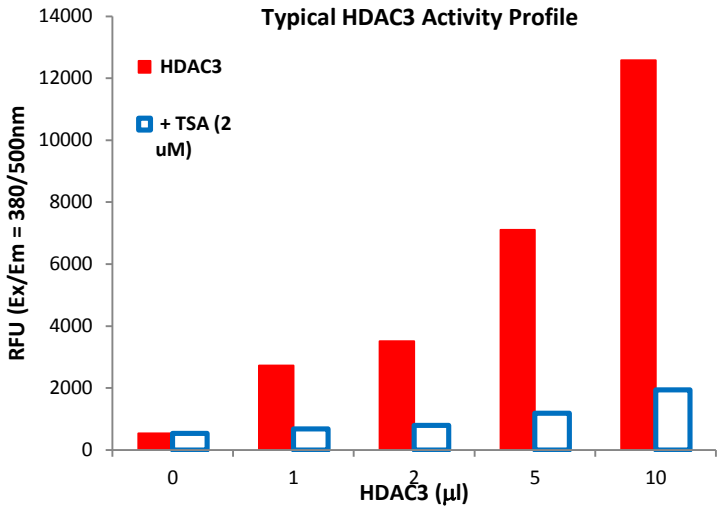
ACTIVITY:

Activity of rh-HDAC3 was tested using Arg-His-Lys-Lys(Ac)-AFC, a fluorogenic, acetylated peptide based on residues 379-382 of p53 as a substrate.

UNIT DEFINITION:

One unit of the recombinant HDAC3 is defined as the amount of enzyme that deacetylates 1 pmol of substrate Arg-His-Lys-Lys(Ac)-AFC per minute at 37°C in a reaction solution containing 50 mM Tris, pH 7.5, 137 mM NaCl, 2.7 mM KCl, 1 mM $MgCl_2$ and 1 mg/ml BSA.

FOR RESEARCH USE ONLY! Not to be used on humans.



HDAC3 Activity Assay. The activity of rh-HDAC3 was determined using the Arg-His-Lys-Lys(Ac)-AFC substrate followed by treatment with Developer from HDAC3 Activity assay Kit (Cat.# K343-100). Quantification was calculated from an AFC standard curve. (TSA = Trichostatin A)

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