

Active Recombinant Human HDAC8

CATALOG #:	7618-20	20 µg
	7618-100	100 µg
	7618-1000	1 mg
LOT #:	_____	
SOURCE:	Sf9 Insect Cells	
PURITY:	≥ 90 % by SDS-PAGE	
SPECIFIC ACTIVITY:	≥ 500 units/mg	
MOLECULAR WEIGHT:	44 kDa	
FORM:	rh-HDAC8 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 8 (HDAC8) 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. Expression of HDAC8 is restricted to cells showing smooth muscle differentiation in normal human tissue and is a novel marker of smooth muscle differentiation. Like other class I and II HDAC members, the activity of HDAC8 is sensitive to HDAC inhibitor Trichostatin A (TSA).

APPLICATION AND USAGE:

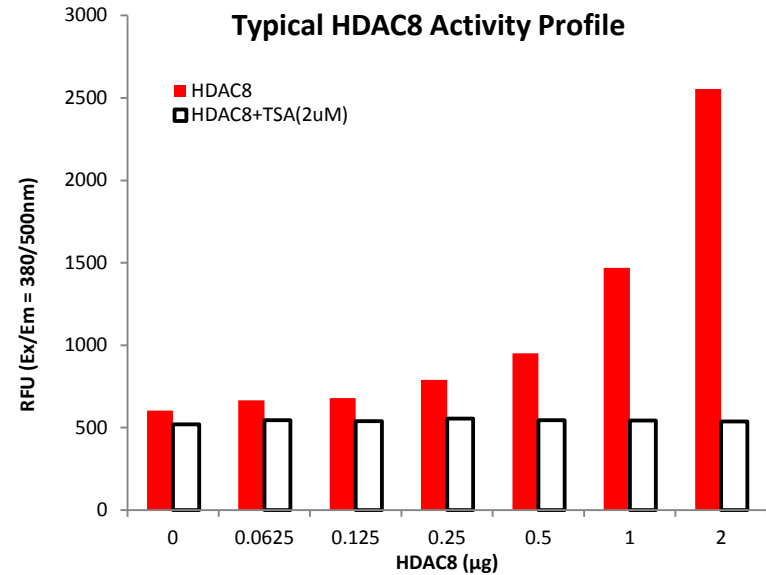
Active HDAC8 is useful in studying enzyme regulation, determining target substrates, screening deacetylase inhibitors, or as a positive control in HDAC activity assays. We recommend using 1-2 unit/assay for analyzing HDAC activity.

ACTIVITY:

Activity of rh-HDAC8 was tested using Arg-His-Lys(Ac)-Lys(Ac)-AFC, a fluorogenic, acetylated peptide based on residues 379-382 of p53 as a substrate.

UNIT DEFINITION:

One unit of the recombinant HDAC8 is defined as the amount of enzyme that deacetylates 1 pmol of substrate Arg-His-Lys(Ac)-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 MgCl₂ and 1 mg/ml BSA.



HDAC8 Activity Assay. The activity of rh-HDAC8 was determined using the Arg-His-Lys(Ac)-Lys(Ac)-AFC substrate followed by treatment with Developer from HDAC Activity assay Kit (Cat.# K330-100). Quantification was calculated from an AFC standard curve. (TSA = Trichostatin A; at 2 µM TSA completely inhibited HDAC8 activity)

RELATED PRODUCTS:

Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

Cell Damage & Repair

- HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits
- HAT Colorimetric Assay Kit & Reagents

Epigenetics

- HDACs
- HATs
- Histones
- Methyltransferase
- SIRT6
- Other

Growth Factors and Cytokines

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