

Human CellExp™ HDAC6, Human Recombinant, Active

CATALOG #:	P1265-50	50 µg
ALTERNATE NAMES:	KIAA0901, JM21, HD6	
SOURCE:	HEK 293 cells (amino acids 2 – 1215)	
PURITY:	≥ 90% by SEC	
MOL. WEIGHT:	This protein has a calculated MW of 131 kDa.	
FORM:	Liquid	
FORMULATION:	In 30 mM HEPES, 140 mM NaCl, 10 mM KCl, 3% glycerol, 0.25 mM TCEP, pH 7.4	
STORAGE CONDITIONS:	Store at -70°C. Thaw on ice, and aliquot into smaller working quantities to avoid multiple freeze/thaw cycles.	

DESCRIPTION: HDAC6 is a Class II HDAC. It is unique among human HDACs in having two full deacetylase domains. As a tubulin deacetylase, HDAC6 may act to promote autophagic clearing of Huntington aggregates and retard HIV1 infection. It can shuttle between the nucleus and cytoplasm, suggesting potential extra nuclear functions by regulating the acetylation status of non-histone substrates. By modifying chromatin structure and other non-histone proteins, HDACs play important roles in controlling complex biological events, including cell development, differentiation, programmed cell death, angiogenesis, and inflammation. Considering these major roles, it is conceivable that dysregulation of HDACs and subsequent imbalance of acetylation and deacetylation may be involved in the pathogenesis of various diseases, including cancer and inflammatory diseases.

BIOLOGICAL ACTIVITY: Deacetylation activity was determined using GAK(Ac)-AMC, Boc-K(Ac)-AMC and Fluor-de-Lys (RHK-K(Ac)-AMC) substrates. Reactions were carried out in a 384-well plate in 20 µL of reaction buffer comprising of 50 mM HEPES, 140 mM

NaCl, 10 mM KCl, 1 mg/ml bovine serum albumin (BSA), and 1 mM TCEP, pH 7.4, for 30 min at 37°C. The reaction was stopped by addition of 20 µl of trypsin solution (2 mg/ml trypsin) and a fluorescence signal of released AMC was quantified using a fluorometer. The enzyme kinetic values were calculated by non-linear regression analysis.

Human recombinant HDAC6, Active

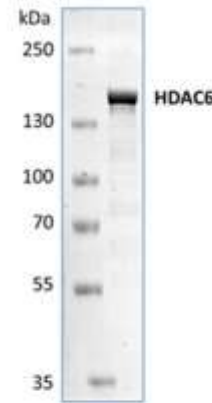
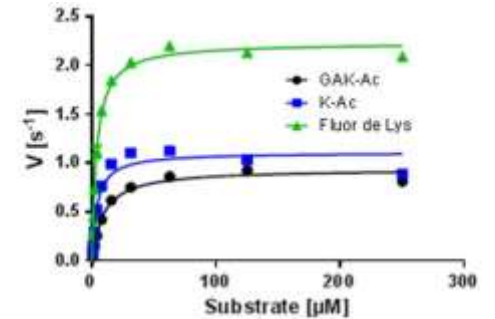


Figure 1: Coomassie blue-stained SDS-PAGE (10% acrylamide) of 1 µg of HDAC6



Michaelis-Menten	GAK-Ac	K-Ac	Fluor de Lys
Vmax [s ⁻¹]	0.94	1.11	2.23
Km [µM]	9	4	4

Figure 2: Steady-state kinetics of full length human HDAC6 on commercial substrates. Data represent mean values ± s.d.; n = 3.

RELATED PRODUCTS:

- HDAC6 Activity Assay kit (Cat. No. K466-100)
- HDAC6 Inhibitor Screening kit (Cat. No. K465-100)
- HDAC Activity Fluorometric Assay Kit (Cat. No. K330-100)
- HDAC Activity Colorimetric Assay Kit (Cat. No. K331-100)
- HDAC Inhibitor Drug Screening Kit (Cat. No. K340-100)
- InSitu HDAC Activity Fluorometric Assay Kit (Cat. No. K339-100)
- HDAC6, human recombinant (Cat. No. 7534-10)
- HDAC6 Antibody (Cat. No. 3606-30T, -100)
- Tubacin (Cat. No. 1984-250, -1000)
- Citarinostat (Cat. No. B1560-5, -25)
- Tubastatin A (Cat. No. 1724-1, -5)
- ACY-775 (Cat. No. B2011-5, -25)

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