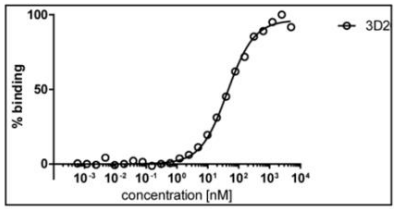
Anti-HDAC6 Monoclonal Antibody (D2 domain-specific)

CATALOG NO:	A1487-100
AMOUNT:	100 µg
ALTERNATE NAME:	KIAA0901, JM21, HD6, HDAC6-D2
ISOTYPE / FORMAT:	Mouse IgG
CLONALITY:	Monoclonal
CLONE:	3D2
IMMUNOGEN:	Human Histone deacetylase 6 (HDAC6; sequence NP_006035.2, UniProtKB - Q9UBN7)
SPECIES REACTIVITY:	Human
FORM:	Liquid
SPECIFICITY:	The antibody detects epitope in D2 domain of HDAC6 (region AA 471-481)
PURIFICATION:	Affinity purified from hybridoma culture supernatant (Protein A)
FORMULATION:	1 mg/ml in PBS, pH 7.4, 0.02% sodium azide
STORAGE CONDITIONS:	Store at -20 °C for long term storage, 4 °C for short term storage, avoid repeated freezing/thawing cycles
DESCRIPTION:	The affinity purified mouse monoclonal antibody is immunospecific for the D2 domain of human histone deacetylase 6 (HDAC6) as determined by ELISA and peptide library screening. HDAC6 belongs to the class II of the histone deacetylase family (EC 3.5.1.98). The protein of molecular mass 131 kDa consists of two catalytic domains, the serine-glutamate-rich SE14 domain and the ubiquitin-binding ZnF domain. HDAC6 shuttles between the nucleus and the cytoplasm, but its localization is predominantly cytoplasmic. The enzyme deacetylates various substrates including α-tubulin, HSP90, cortactin, histones and other proteins. Described protein plays an important role in microtubule-dependent cell motility, apoptosis, cell signaling and transcriptional regulation, protein degradation, immune response and DNA repair. HDAC6 is linked to several neuronal diseases and carcinogenesis.
APPLICATION:	*ELISA:* 0.5 – 5µg/ml; *Immunocytochemistry*: 5 – 50 µg/ml; WB: 0.5-5µg/ml (*Please note that working concentration should be optimized for each technique by each laboratory)*

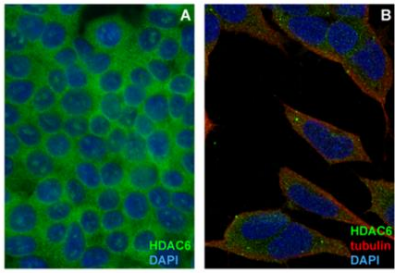
ELISA

Detection of human HDAC6 by anti-HDAC6-D2 mAb using ELISA. MaxiSorp plate was coated by recombinant human HDAC6. BSA-blocked plate was probed with dilution series of anti-HDAC6-D2 mAb (10^{-4} - 10^{3} nM) followed by incubation with anti-mouse IgG secondary antibody conjugated to HRP. Colorimetric signal of processed OPD substrate was measured on ELISA reader at 492 nm.



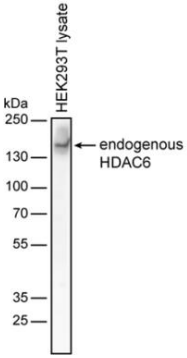
Immunocytochemistry

Detection of human endogenous HDAC6 by anti-HDAC6-D2 mAb (25 µg/ml ON) in formaldehyde-fixed and Triton-permeabilized HEK293T (A) and SH-SY5Y (B) cells. To visualize cytoskelet SH-SY5Y cells were additionally treated by anti-tubulin Ab. Coverslips were incubated with anti-mouse Ab and anti-rabbit Ab conjugated to AlexaFluor488 and AlexaFluor647, respectively. Slides were counterstained with DAPI.



Western Blot

Detection of human HDAC6 by anti-HDAC6-D2 mAb in Western blot. Cell lysate of HEK293T cell line was separated in SDS PAGE gel and transfered on PVDF membrane by blotter. Membrane was blocked in 5% milk, probed with 1 µg/ml anti-HDAC6-D2 mAb followed by HRP-conjugated anti-mouse IgG secondary antibody. The experiment was conducted under reducing conditions using PBS/0.05% Tween-20 buffer.



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)**
- InSitu HDAC Activity Fluorometric Assay Kit **(Cat. No. K339-100)**
- HDAC6, human recombinant **(Cat. No. 7534-10)**
- Human CellExp™ HDAC6, Human Recombinant, Active **(Cat. No. P1265-50)**
- HDAC6 Antibody **(Cat. No. 3606-30T, -100)**
- Tubacin **(Cat. No. 1984-250, -1000)**

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