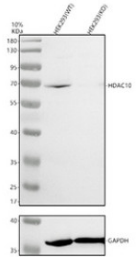
HDAC10 Antibody / Polyamine Deacetylase HDAC10 Antibody (RQ4431)

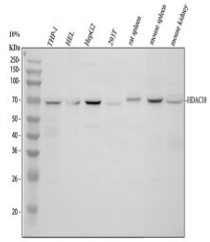
Catalog No.	Formulation	Size
RQ4431	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q969S8
Applications	Western blot: 0.5-1ug/ml Direct ELISA: 0.1-0.5ug/ml (recombinant human protein) (BSA-free format available)
Limitations	This HDAC10 Antibody / Polyamine Deacetylase HDAC10 Antibody is available for research use only.



HDAC10 Antibody Western Blot Validation in HEK293 Wild-Type and HDAC10 Knockout Cells. Western blot analysis of human HEK293 wild-type (WT, lane 1) and HDAC10 knockout (KO, lane 2) whole-cell lysates using Polyamine Deacetylase HDAC10 Antibody at 0.5 ug/ml. Each lane contains 30 ug of total protein under reducing conditions. A band at approximately 68 kDa is detected in the WT lysate and absent in the KO sample, supporting antibody specificity for HDAC10. The observed molecular weight is consistent with the predicted size of approximately 71 kDa. GAPDH serves as the loading control.



HDAC10 Antibody detection across human, rat and mouse samples by WB. Western blot testing with the HDAC10 Antibody at 0.5 ug/ml. Lane 1: human THP-1; lane 2: human HEL; lane 3: human HepG2; lane 4: human 293T; lane 5: rat spleen; lane 6: mouse spleen; lane 7: mouse kidney. Thirty micrograms of protein were loaded per lane under reducing conditions. A predominant band is detected near the expected molecular weight of approximately 71 kDa across the samples, supporting recognition of HDAC10 in human, rat and mouse lysates. The cross-species detection demonstrates western blot performance with this Polyamine Deacetylase HDAC10 Antibody.

Description

HDAC10 Antibody / Polyamine Deacetylase HDAC10 Antibody recognizes histone deacetylase 10, an enzyme encoded by the HDAC10 gene. HDAC10 belongs to the class IIb histone deacetylase family and contains an N-terminal catalytic domain followed by a second, incomplete catalytic-like domain. Although historically classified according to its relationship with histone deacetylases, HDAC10 has emerged as a polyamine deacetylase with strong activity toward acetylated polyamines. This biochemical function distinguishes HDAC10 from many other members of the HDAC family and connects the enzyme with regulation of intracellular polyamine metabolism.

HDAC10 functions as a zinc-dependent deacetylase and is particularly associated with removal of acetyl groups from N8-acetylspermidine and related polyamine substrates. Polyamines such as spermidine and spermine participate in numerous cellular processes, including proliferation, nucleic acid interactions, translation and responses to cellular stress. Deacetylation can promote recycling of acetylated polyamines and influence their intracellular availability. An HDAC10 Antibody can therefore support research examining the relationship between deacetylase activity, polyamine homeostasis and cellular metabolism.

HDAC10 has also been investigated in autophagy, lysosomal biology, DNA damage responses and regulation of cell survival. Its activity can influence cellular adaptation to stress and has attracted particular interest in cancer biology, where altered HDAC10 expression or function may contribute to tumor cell survival and therapeutic resistance. A Polyamine Deacetylase HDAC10 Antibody provides a useful reagent for investigating these functions while distinguishing HDAC10 from HDAC family members whose principal biological activities are more closely associated with chromatin regulation.

Interest in HDAC10 also extends to the development of selective deacetylase inhibitors and efforts to understand how polyamine metabolism interacts with cancer, neurological biology and cellular homeostasis. Alternative splicing produces multiple HDAC10 transcript variants, adding further complexity to the regulation of this enzyme. NSJ Bioreagents provides this polyclonal reagent for researchers investigating HDAC10 biology and deacetylase function. An HDAC10 Antibody provides a useful tool for studying polyamine deacetylase HDAC10 and its roles in polyamine metabolism, cellular stress responses and regulatory pathways.

This HDAC10 Antibody is part of our Epigenetics Antibodies collection.

Application Notes

Optimal dilution of the HDAC10 Antibody / Polyamine Deacetylase HDAC10 Antibody should be determined by the researcher.

Immunogen

A human partial recombinant protein corresponding to amino acids T3-Q290 was used as the immunogen for the HDAC10 antibody.

Storage

After reconstitution, the HDAC10 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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