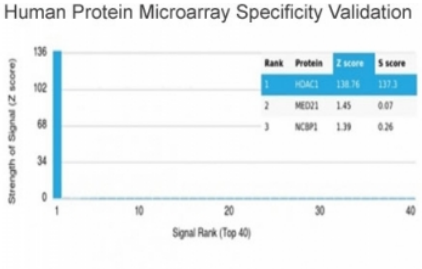
HDAC1 Antibody PCRP-HDAC1-1B7 / Class I HDAC Antibody [clone PCRP-HDAC1-1B7] (V9651)

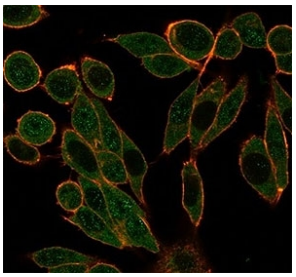
Catalog No.	Formulation	Size
V9651-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9651-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9651SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

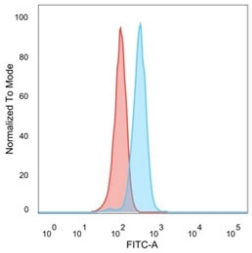
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG
Clone Name	PCRP-HDAC1-1B7
Purity	Protein A/G affinity
UniProt	Q13547
Applications	ELISA (order BSA-free format for coating) Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml
Limitations	This HDAC1 Antibody PCRP-HDAC1-1B7 / Class I HDAC Antibody is available for research use only.



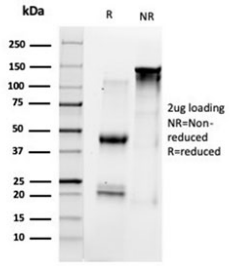
HDAC1 Antibody PCRP-HDAC1-1B7 Protein Microarray Validation. Protein microarray analysis of clone PCRP-HDAC1-1B7 using a HuProt array containing more than 19,000 full-length human proteins. HDAC1 produces the dominant signal with strong separation from the next-highest array targets. The Z-score represents signal strength relative to the array mean, while the S-score measures separation between the intended target and the next-highest signal. These results demonstrate strong specificity of this Class I HDAC antibody for HDAC1.



HDAC1 Antibody PCRP-HDAC1-1B7 in Human HeLa Cervical Cancer Cells IF. Immunofluorescence testing of PFA-fixed human HeLa cervical cancer cells with clone PCRP-HDAC1-1B7 (green) and phalloidin (red). Strong, predominantly nuclear HDAC1 staining is observed, consistent with the role of this Class I histone deacetylase in chromatin regulation and transcriptional control.



HDAC1 Antibody PCRP-HDAC1-1B7 in Human HeLa Cervical Cancer Cells FACS. Flow cytometry testing of PFA-fixed human HeLa cervical cancer cells with clone PCRP-HDAC1-1B7. HDAC1 antibody staining is shown in blue and the isotype control in red. A clear fluorescence shift is observed relative to the control, demonstrating detection of endogenous HDAC1 in the tested cells.



Purified HDAC1 Antibody PCRP-HDAC1-1B7 SDS-PAGE. Electrophoretic analysis of 2 ug of purified, BSA-free clone PCRP-HDAC1-1B7 under reducing (R) and non-reducing (NR) conditions. The reducing lane shows antibody heavy and light chain components, while the non-reducing lane shows predominantly intact immunoglobulin, supporting the integrity and purity of the monoclonal antibody preparation.

Description

HDAC1 Antibody PCRP-HDAC1-1B7 / Class I HDAC Antibody recognizes histone deacetylase 1, a nuclear enzyme encoded by the HDAC1 gene. HDAC1 belongs to the Class I family of histone deacetylases and removes acetyl groups from lysine residues on histones and other protein substrates. Histone deacetylation can promote a more compact chromatin environment and influence access of transcriptional machinery to DNA, making HDAC1 an important regulator of epigenetic gene expression.

HDAC1 functions primarily as a component of multiprotein transcriptional regulatory complexes rather than acting independently. Together with the closely related HDAC2 protein, HDAC1 is incorporated into complexes including Sin3, NuRD and CoREST. These assemblies recruit deacetylase activity to specific chromatin regions and participate in transcriptional repression, chromatin remodeling and regulation of cellular differentiation. The composition and recruitment of individual complexes provide important mechanisms for directing Class I HDAC activity within the nucleus.

Through its effects on chromatin and transcription, HDAC1 contributes to processes including cell-cycle progression, DNA damage responses, differentiation and development. Dysregulated HDAC activity has also been investigated extensively in cancer biology, where altered epigenetic regulation can contribute to abnormal gene-expression programs. HDAC1 and related histone deacetylases are consequently important research targets in studies of chromatin biology, transcriptional regulation and therapeutic epigenetics.

Clone PCRP-HDAC1-1B7 is a mouse monoclonal antibody generated against recombinant full-length human HDAC1 protein. The clone has been evaluated using a human protein microarray as well as cell-based assays, providing complementary approaches for examining antibody recognition. NSJ Bioreagents provides this HDAC1 Antibody for research into chromatin regulation, histone deacetylation and epigenetic control of gene expression. A Class I HDAC Antibody can support studies examining HDAC-associated transcriptional and chromatin regulatory mechanisms.

Explore our Epigenetics Antibodies page for additional reagents targeting proteins involved in chromatin remodeling,

histone modification and epigenetic regulation of gene expression.

Application Notes

Optimal dilution of the HDAC1 Antibody PCRP-HDAC1-1B7 / Class I HDAC Antibody should be determined by the researcher.

Immunogen

Recombinant full-length human protein was used as the immunogen for the HDAC1 antibody.

Storage

Aliquot the HDAC1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

HDAC1 antibody, Histone deacetylase 1 antibody, HD1 antibody, Class I HDAC antibody, Histone deacetylase 1A antibody

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