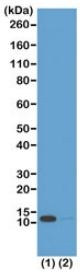
H4K16ac Antibody / Histone H4 Lysine 16 Acetylation Chromatin Structure Antibody [clone RM204] (R20226)

Catalog No.	Formulation	Size
R20226-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20226-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25 ug

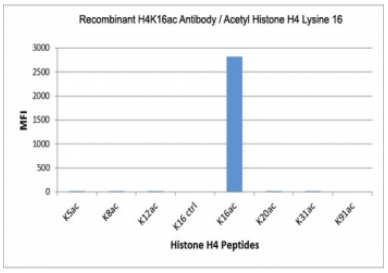
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM204
Purity	Protein A purified from animal origin-free supernatant
UniProt	P62805
Gene ID	121504
Applications	Western blot: 0.5-2ug/ml ELISA: 0.5-1ug/ml
Limitations	This recombinant H4K16ac antibody is available for research use only.



H4K16ac Antibody for WB. Western blot analysis of histone H4 lysine 16 acetylation in chromatin samples. Lane 1: acid extract of human HeLa cells treated with sodium butyrate, Lane 2: acid extract of untreated human HeLa cells. A band is detected at approximately 11 kDa, consistent with the predicted molecular weight of Histone H4 (HIST1H4). Increased signal intensity in sodium butyrate-treated cells reflects enhanced H4K16 acetylation associated with chromatin relaxation and higher-order chromatin structure regulation.



H4K16ac Antibody specificity. Peptide binding analysis demonstrating selective recognition of histone H4 lysine 16 acetylation. Strong signal is observed exclusively for the H4K16ac peptide, with no detectable reactivity toward unmodified lysine 16 (K16 control) or other acetylated histone H4 peptides. These results confirm high specificity of the H4K16ac antibody for higher-order chromatin structure-associated acetylated histone H4.

Description

Histone H4 (HIST1H4) is a core nucleosomal histone whose lysine 16 acetylation (H4K16ac) is a key regulator of higher-order chromatin structure and nucleosome interaction dynamics. H4K16ac Antibody (clone RM204) detects this modification, which directly controls chromatin fiber folding and the transition between compact and relaxed chromatin states. Among histone H4 modifications, lysine 16 acetylation is one of the most influential determinants of global chromatin architecture. This antibody is part of our broader Histone H4 antibody collection, including acetylation, methylation, phosphorylation, and total H4 detection reagents for chromatin and epigenetics research.

H4K16ac antibody, also referred to as Histone H4 K16 acetyl antibody or HIST1H4 acetylation antibody in the literature, is widely used to study chromatin structure and epigenetic regulation. Acetylation at lysine 16 is catalyzed by the histone acetyltransferase MOF (KAT8), which plays a central role in regulating chromatin organization and genome accessibility. This modification has been extensively linked to the control of chromatin compaction at a structural level.

Mechanistically, acetylation at lysine 16 disrupts interactions between the histone H4 tail and adjacent nucleosomes, preventing tight chromatin packing. This interference with nucleosome-nucleosome contacts leads to reduced chromatin fiber condensation and promotes a more open chromatin configuration. Unlike other acetylation sites that primarily influence local chromatin accessibility, H4K16ac has a direct impact on higher-order chromatin folding across extended genomic regions.

The histone H4 tail is essential for mediating chromatin fiber interactions, and modification at lysine 16 specifically alters these interactions to control global chromatin structure. This makes H4K16ac a key marker for studying large-scale chromatin organization, chromatin decondensation, and structural epigenetic regulation.

In addition to its structural role, H4K16 acetylation is involved in DNA repair processes, where localized chromatin relaxation is required to allow access to damaged DNA. Altered levels of H4K16ac have been associated with genome instability and disease, particularly in cancer, where disruption of chromatin architecture contributes to abnormal gene regulation.

A recombinant rabbit monoclonal antibody such as clone RM204 enables specific detection of this modification in studies focused on higher-order chromatin structure, chromatin relaxation, and epigenetic control of genome organization.

Chromatin organization and epigenetic pathway studies may also benefit from our Histone H4 antibody targeting core nucleosome structure and nuclear chromatin biology.

Application Notes

The stated application concentrations are suggested starting points. Titration of the H4K16ac Antibody / Histone H4 Lysine 16 Acetylation Chromatin Structure Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An acetyl-peptide corresponding to Acetyl-Histone H4 (Lys16) was used as the immunogen for this H4K16ac Antibody / Histone H4 Lysine 16 Acetylation Chromatin Structure Antibody.

Storage

Store the recombinant H4K16ac antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

H4K16ac antibody, Histone H4 acetyl lysine 16 antibody, HIST1H4 acetylation antibody, H4 chromatin structure antibody

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