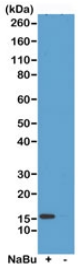
H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody [clone RM222] (R20240)

Catalog No.	Formulation	Size
R20240-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20240-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25 ug

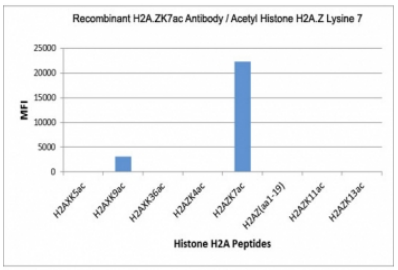
Recombinant RABBIT MONOCLONAL

Bulk quote request

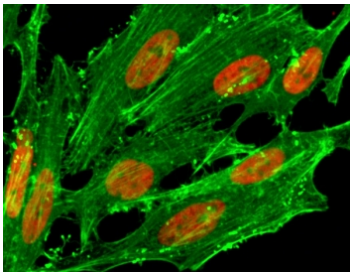
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM222
Purity	Protein A purified from animal origin-free supernatant
UniProt	P0C0S5
Gene ID	3015
Applications	Western Blot : 0.5-2ug/ml ELISA : 0.2-1ug/ml Immunocytochemistry : 1-2ug/ml
Limitations	This recombinant H2A.ZK7ac antibody is available for research use only.



H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody (clone RM222) for WB. Western blot analysis of H2AFZ / Histone H2A.Z Lys7 acetylation (H2A.ZK7ac) in acid extracts from human HeLa cells untreated (-) or treated (+) with sodium butyrate using H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody. A band is detected at the predicted molecular weight of approximately 14 kDa in treated cells, consistent with increased histone acetylation and inducible transcriptional responsiveness following HDAC inhibition.



H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody (clone RM222) specificity analysis. Peptide binding assay demonstrating selective recognition of H2AFZ / Histone H2A.Z Lys7 acetylation (K7ac). Strong signal is observed exclusively with the H2A.ZK7ac peptide, while no detectable reactivity is seen with non-modified Lys7 or other acetylated histone H2A peptides, confirming high specificity for the Lys7-acetylated H2A.Z state associated with transcriptional responsiveness and inducible gene regulation.



ICC/IF staining of HeLa cells treated with sodium butyrate using recombinant H2A.ZK7ac antibody (red). Actin filaments have been labeled with fluorescein phalloidin (green).

Description

Histone variant H2A.Z (H2AFZ) acetylation at lysine 7 is a regulatory chromatin modification associated with transcriptional responsiveness and dynamic gene regulation. H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody (clone RM222) is designed to detect H2A.Z acetylated at lysine 7, providing a marker of chromatin regions that respond rapidly to signaling pathways and environmental stimuli. Included within the Histone H2A antibodies collection, this antibody enables analysis of histone modification patterns and chromatin regulatory mechanisms involving H2A and its variants.

H2AFZ antibody, also referred to as H2A.Z antibody and H2A.ZK7ac antibody in the literature, recognizes a modification specific to the H2A.Z histone variant. H2A.Z is enriched at promoters and regulatory regions where it modulates nucleosome positioning and chromatin accessibility.

This recombinant rabbit monoclonal clone RM222 antibody is uniquely positioned for studies of inducible gene expression and transcriptional responsiveness. H2A.Z lysine 7 acetylation is associated with genes that are activated in response to cellular signaling events, including stress responses and developmental cues.

At the molecular level, acetylation of H2A.Z reduces nucleosome stability and enhances chromatin accessibility, allowing rapid recruitment of transcription factors and regulatory complexes. H2A.ZK7ac is frequently observed at inducible promoters and regulatory elements undergoing dynamic activation.

This modification contributes to flexible chromatin architecture and enables rapid transcriptional responses. Its presence reflects regulatory adaptability rather than stable activation or repression.

In western blot applications, the antibody detects H2A.Z at approximately 14 kDa, with signal corresponding to acetylated chromatin associated with transcriptional responsiveness. Detection reflects dynamic gene regulation rather than constitutive transcriptional activity.

At the cellular level, H2A.Z lysine 7 acetylation localizes to the nucleus and is enriched in regulatory chromatin regions. This supports its use in studying signal-dependent gene activation and chromatin remodeling.

This antibody supports detection of Lys7-acetylated H2A.Z, enabling investigation of transcriptional responsiveness, chromatin remodeling, and epigenetic regulation of gene expression.

Application Notes

The stated application concentrations are suggested starting points. Titration of the H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An acetyl-peptide corresponding to Acetyl-Histone H2A.Z (Lys7) was used as the immunogen for this H2A.ZK7ac Antibody / H2AFZ Transcriptional Responsiveness Antibody.

Storage

Store the recombinant H2A.ZK7ac antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

H2A.Z Lys7 acetylation antibody, H2AFZ K7ac transcription antibody, acetyl H2A.Z Lys7 antibody, H2AZ K7 acetyl histone antibody