

ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Monoclonal antibody [RM260] recognizes Histone H2B acetyl (Lys23)
Tested Reactivity	Hu
Tested Application	ICC/IF, WB
Specificity	This antibody reacts to Histone H2B acetylated at Lysine 23 (K23ac). No cross reactivity with other acetylated Lysines in histones.
Host	Rabbit
Clonality	Monoclonal
Clone	RM260
Isotype	IgG
Target Name	Histone H2B
Species	Others
Immunogen	An acetyl-peptide corresponding to Acetyl-Histone H2B (Lys23).
Conjugation	Un-conjugated
Alternate Names	Histone H2B.f; Histone H2B type 1-B; Histone H2B.1; H2B/f; H2BFF; H2B.1

Application Instructions

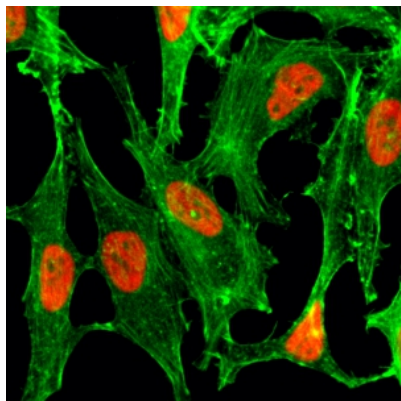
Application table	Application	Dilution
	ICC/IF	0.5 - 2 µg/ml
	WB	0.5 - 2 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.09% Sodium azide, 50% Glycerol and 1% BSA.
Preservative	0.09% Sodium azide
Stabilizer	50% Glycerol and 1% BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

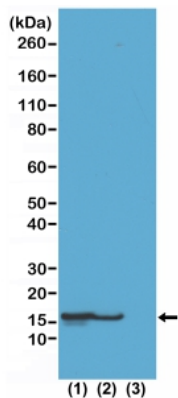
Bioinformation

Database links	GeneID: 3018 Human Swiss-port # P33778 Human
Gene Symbol	HIST1H2BB
Gene Full Name	histone cluster 1, H2bb
Background	<p>Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a replication-dependent histone that is a member of the histone H2B family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6p22-p21.3. [provided by RefSeq, Aug 2015]</p>
Function	<p>Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. [UniProt]</p>
PTM	<p>Monoubiquitination at Lys-35 (H2BK34Ub) by the MSL1/MSL2 dimer is required for histone H3 'Lys-4' (H3K4me) and 'Lys-79' (H3K79me) methylation and transcription activation at specific gene loci, such as HOXA9 and MEIS1 loci. Similarly, monoubiquitination at Lys-121 (H2BK120Ub) by the RNF20/40 complex gives a specific tag for epigenetic transcriptional activation and is also prerequisite for histone H3 'Lys-4' and 'Lys-79' methylation. It also functions cooperatively with the FACT dimer to stimulate elongation by RNA polymerase II. H2BK120Ub also acts as a regulator of mRNA splicing: deubiquitination by USP49 is required for efficient cotranscriptional splicing of a large set of exons. Phosphorylation at Ser-37 (H2BS36ph) by AMPK in response to stress promotes transcription (By similarity). Phosphorylated on Ser-15 (H2BS14ph) by STK4/MST1 during apoptosis; which facilitates apoptotic chromatin condensation. Also phosphorylated on Ser-15 in response to DNA double strand breaks (DSBs), and in correlation with somatic hypermutation and immunoglobulin class-switch recombination.</p> <p>GlcNAcylation at Ser-113 promotes monoubiquitination of Lys-121. It fluctuates in response to extracellular glucose, and associates with transcribed genes (By similarity).</p> <p>Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes.</p>



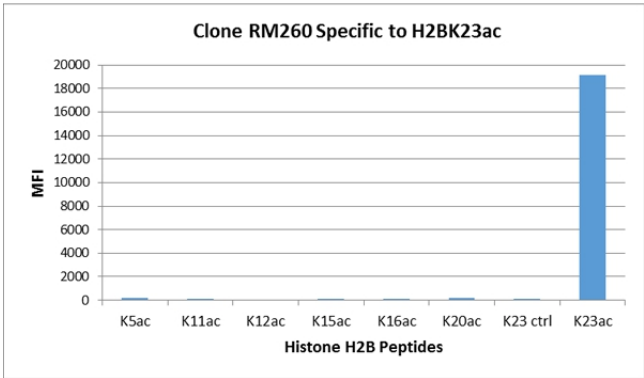
ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260] ICC/IF image

Immunofluorescence: HeLa cells treated with sodium butyrate, stained with ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260] (red). Actin filaments have been labeled with fluorescein phalloidin (green).



ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260] WB image

Western blot: Acid extracts of HeLa cells 1) treated or 2) untreated with sodium butyrate, and 3) Recombinant Histone H2B, stained with ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260] at 0.5 µg/ml.



ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260] Specificity test image

ARG57250 anti-Histone H2B acetyl (Lys23) antibody [RM260] specifically reacts to Histone H2B acetylated at Lysine 23 (K23ac). No cross reactivity with acetylated Lysine 5 (K5ac), Lysine 11 (K11ac), Lysine 12 (K12ac), Lysine 15 (K15ac), Lysine 20 (K20ac), or non-modified Lysine 23 in histone H2B.