

## ARG66177 anti-Histone H2B antibody

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	Mouse Monoclonal antibody recognizes Histone H2B
Tested Reactivity	Hu, Ms, Rat
Tested Application	IHC-P, WB
Specificity	The antibody detects endogenous Histone H2B protein.
Host	Mouse
Clonality	Monoclonal
Target Name	Histone H2B
Species	Human
Immunogen	Synthetic peptide of Human Histone H2B.
Conjugation	Un-conjugated
Alternate Names	Histone H2B.f; Histone H2B type 1-B; Histone H2B.1; H2B/f; H2BFF; H2B.1

### Application Instructions

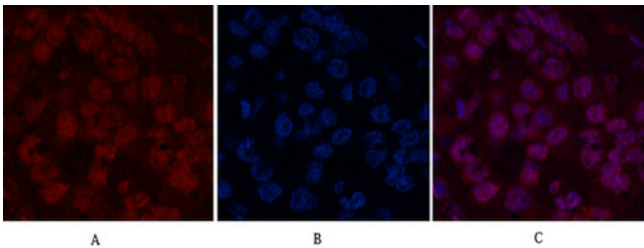
Application table	Application	Dilution
	IHC-P	1:200
	WB	1:1000 - 1:3000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
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.
Note	For laboratory research only, not for drug, diagnostic or other use.

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>
Calculated Mw	14 kDa
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>

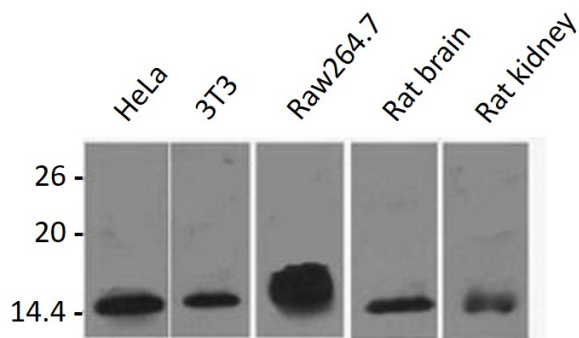
Images



ARG66177 anti-Histone H2B antibody IHC image

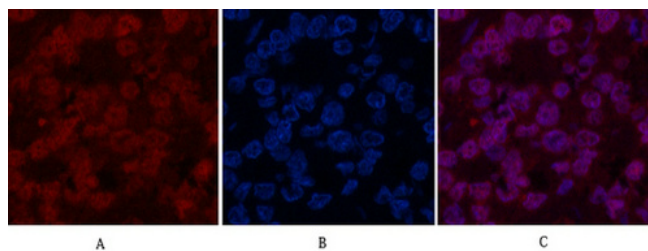
Immunohistochemistry: Human liver cancer tissue stained with ARG66177 anti-Histone H2B antibody (red) at 1:200 dilution (4°C, overnight).

Picture A: Target. Picture B: DAPI. Picture C: merge of A+B.



ARG66177 anti-Histone H2B antibody WB image

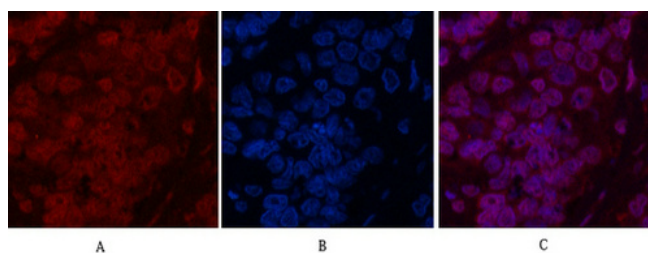
Western blot: 1) HeLa, 2) 3T3, 3) Raw264.7, 4) Rat brain, and 5) Rat kidney lysates stained with ARG66177 anti-Histone H2B antibody at 1:2000 dilution.



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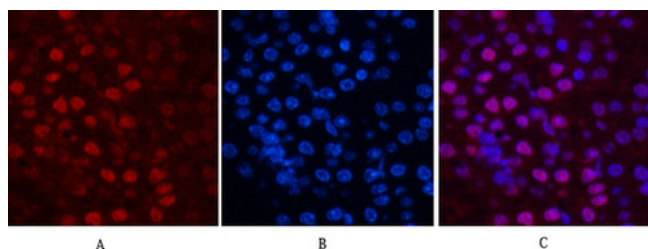
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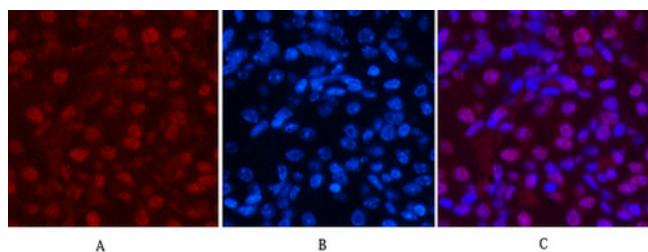
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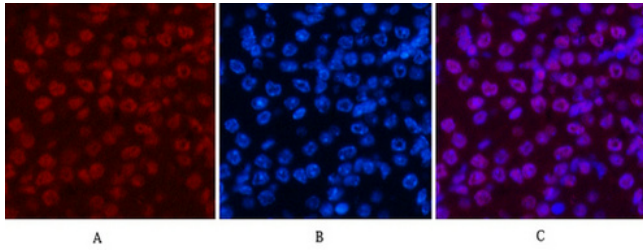
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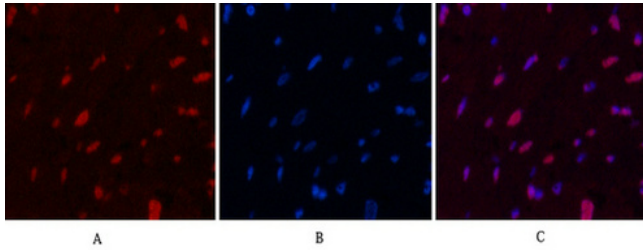


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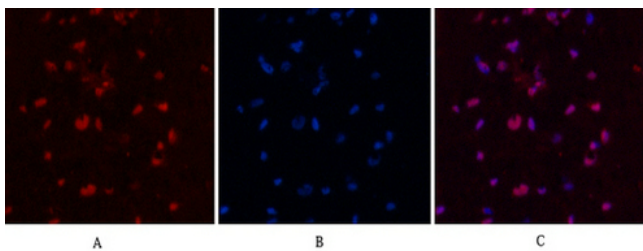


ARG66177 anti-Histone H2B antibody IHC image

Immunohistochemistry: Rat heart tissue stained with ARG66177 anti-Histone H2B antibody (red) at 1:200 dilution (4°C, overnight).

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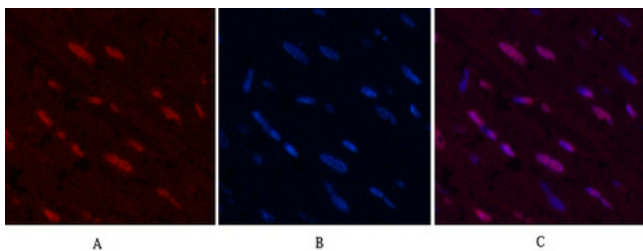


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