abcam

Product datasheet

Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade ab62335

Recombinant RabMAb

6 Abreviews 4 References 4 Images

Overview

Product name	Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade
Description	Rabbit monoclonal [EP955Y] to Histone H2B (acetyl K15) - ChIP Grade
Host species	Rabbit
Specificity	This antibody only detects Histone H2B acetylated on Lysine 15.
Tested applications	**Suitable for:** ChIP-sequencing, WB, IHC-P **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa whole cell lysate (**ab150035**) or human breast carcinoma tissue; ChIP-seq: Chromatin prepared from HeLa cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant

Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP955Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab62335 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ChIP-sequencing		Use 4µg for 10^7 cells.
WB	★★★★☆ **(2)**	1/2000 - 1/5000. Detects a band of approximately 17 kDa (predicted molecular weight: 14 kDa).
IHC-P	★★★★☆ **(1)**	1/100 - 1/250.

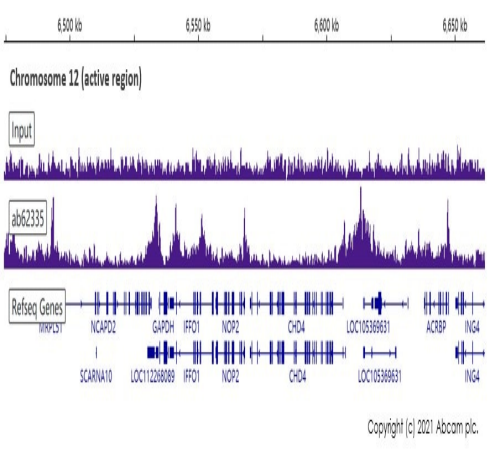
Application notes Is unsuitable for IP.

Target

Relevance 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. Subunit structure The nucleosome is a histone octamer containing two molecules each of H2A, H2B, H3 and H4 assembled in one H3-H4 heterotetramer and two H2A-H2B heterodimers. The octamer wraps approximately 147 bp of DNA. Post-translational modification 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. 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. GlcNAcylation at Ser-113 promotes monoubiquitination of Lys-121. It fluctuates in response to extracellular glucose, and associates with transcribed genes. 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.

Cellular localization Nuclear

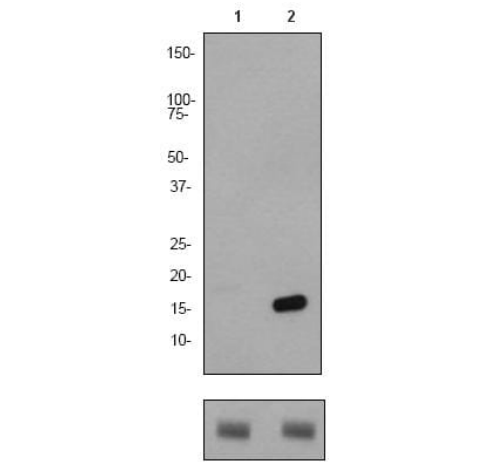
Images



ChIP-sequencing - Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade (ab62335)

Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 HeLa cells and 4 µg of ab62335 [EP955Y]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads.

Additional screenshots of mapped reads can be downloaded **here**.



Western blot - Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade (ab62335)

All lanes : Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade (ab62335) at 1/2000 dilution

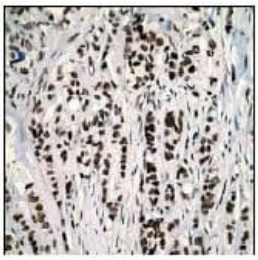
Lane 1 : HeLa cell lysate (untreated)
Lane 2 : HeLa cell lysate (treated with TSA)

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat anti-Rabbit HRP conjugate at 1/2000 dilution

Predicted band size: 14 kDa
Observed band size: 17 kDa

The bottom image shows beta Tubulin as a positive control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade (ab62335)

Ab62335 (1/100-1/250) staining human Histone H2B in human breast carcinoma tissue by immunohistochemistry using paraffin embededd tissue.

Anti-Histone H2B (acetyl K15) antibody [EP955Y] - ChIP Grade (ab62335)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors