

# Anti-Histone H2A-Bbd antibody ab4175

[3 References](#) [2 Images](#)

### Overview

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<b>Product name</b>	Anti-Histone H2A-Bbd antibody
<b>Description</b>	Rabbit polyclonal to Histone H2A-Bbd
<b>Host species</b>	Rabbit
<b>Specificity</b>	Known to detect the recombinant form of human Histone H2A BBD. However, no reaction has yet been demonstrated against the endogenous protein in histone preparations. We believe that this is because of the low abundance of this variant in such preparations.
<b>Tested applications</b>	<b>Suitable for:</b> ICC, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Chicken, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Isotype

IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab4175 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
ICC		Use a concentration of 3 µg/ml. Staining may not be specific for H2A.Bbd (see image).
WB		1/500. Detects a band of approximately 12.5 kDa (predicted molecular weight: 12.5 kDa). As the WB shows, we can not find any reaction with any of the different histone extracts that we have used from different sources (calf, human, chicken). However, the antibody is very specific against the recombinant form of the protein.

## Target

### Function

Atypical histone H2A which can replace conventional H2A in some nucleosomes and is associated with active transcription and mRNA processing. 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. Nucleosomes containing this histone are less rigid and organize less DNA than canonical nucleosomes in vivo. They are enriched in actively transcribed genes and associate with the elongating form of RNA polymerase. They associate with spliceosome components and are required for mRNA splicing. May participate in spermatogenesis.

### Tissue specificity

Present in mature sperm.

### Sequence similarities

Belongs to the histone H2A family.

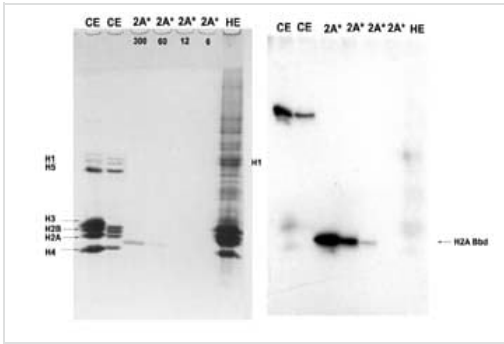
### Domain

The docking domain is responsible for the weaker heterodimerization with H2B.

### Cellular localization

Nucleus. Chromosome. Associated with the active X chromosome and with autosomes, while it is absent from the inactive X chromosome and excluded from Barr bodies.

## Images



Western blot - Anti-Histone H2A-Bbd antibody (ab4175)

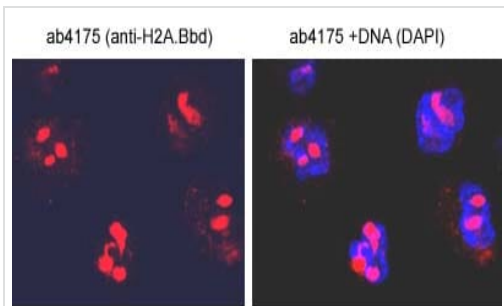
Juan Ausio

## H2A-Bbd (ab4175)

CE= chicken erythrocyte (10 and 2 micrograms) , HE= HeLa cells (10 micrograms) and 2A\*= recombinant H2ABbd (the numbers underneath the lanes are the number of nanograms loaded in each lane).

The primary antibody dilution was 1:500 and the secondary was 1:3000.

As the WB shows, we can not find any reaction with any of the different histone extracts that we have used from different sources (calf, human, chicken). However, the antibody is very specific against the recombinant form of the protein.



Immunocytochemistry - Anti-Histone H2A-Bbd antibody (ab4175)

This image is courtesy of Petra Hajkova, University of Cambridge

Mouse embryonic fibroblasts (MEFs) were fixed in 4%PFA, permeabilised in PBS 1%BSA 0.1%TX-100 and incubated with ab4175 (anti-H2A.Bbd) antibody o/n. The antibody appears to show nucleolar staining. The antibody gave the same staining pattern in different cell types. The dilution used was 3ug/ml.

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

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