abcam

ab267372

# Anti-Histone H3 (phospho S10) antibody [EPR24060-36]

Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372) is a rabbit monoclonal antibody detecting Histone H3 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF, PepArr**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | Advanced Validation | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR24060-36 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.537 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

**Tested**

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide - Human |
| **Dilution info** | - |
| **Notes** | - |

## IP

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/30 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide - Human |
| **Dilution info** | - |
| **Notes** | - |

## ChIP

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse, Rat, Synthetic peptide - Human |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide - Human |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/500 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide - Human |
| **Dilution info** | - |
| **Notes** | - |

## PepArr

### Tested

| | |
|---|---|
| **Species** | Synthetic peptide - Human |
| **Dilution info** | 0.02 µg/mL |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Human, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/100 |

| | |
|---|---|
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/100 |
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 |
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide - Human |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information H3C1 phospho S10

| | |
|---|---|
| **Function** | 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. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |

| | |
|---|---|
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**What is this antibody validated in?**
Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), Peptide Array in Human, Mouse, Rat samples.

**What is the molecular weight of Histone H3?**
Anti-Histone H3 (phospho S10) [EPR24060-36] (ab267372) specifically detects a band for Histone H3 (UniProt: P68431) at a molecular weight of 15kDa.

**Other related products**
We have a range of other formats of antibody clone [EPR24060-36] also available for your convenience: ab267372, Carrier free - ab282284, PE - ab317889, APC - ab317926, Alexa Fluor® 488 - ab317966, Alexa Fluor® 594 - ab318007, Alexa Fluor® 555 - ab318049, Alexa Fluor® 647 - ab318091, Alexa Fluor® 750 - ab321524

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
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 batch production

For more information, read more on recombinant antibodies.

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

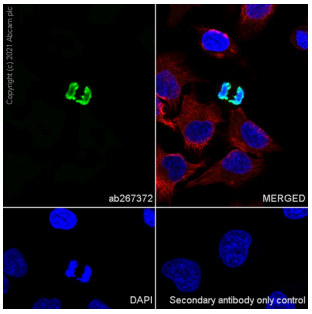
In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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## 11 product images

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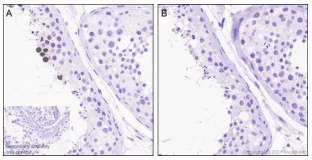



### Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H3 (phospho S10) antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa cells labelling Histone H3 (phospho S10) with ab267372 at 1/1000 (0.54 µg/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HeLa cells in M phase. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

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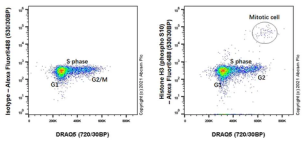


## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 (phospho S10) antibody

Immunohistochemical analysis of paraffin-embedded human testis tissue labelling Histone H3 (phospho S10) with ab267372 at 1/100 (5.4 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on human testis without alkaline phosphatase treatment (image A). No signal was detected when tissues were treated with alkaline phosphatase (image B). The section was incubated with ab267372 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

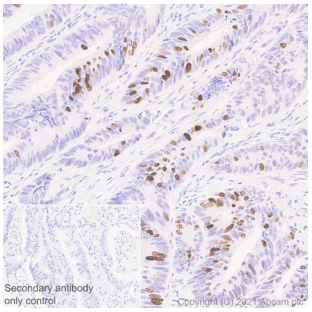
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



## Flow Cytometry - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Flow Cytometry staining using rabbit Anti-Histone H3 (phospho S10) antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (Human cervix adenocarcinoma cell) cells labelling Histone H3 (phospho S10) with ab267372 at 1/500 dilution (0.1µg)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
Cells were co-stained with DRAQ5 to differentiate cell cycle phase.

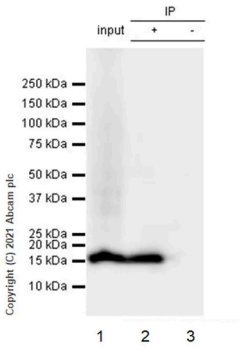



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 (phospho S10) antibody

Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue labelling Histone H3 (phospho S10) with ab267372 at 1/100 (5.4 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on human colon carcinoma. The section was incubated with ab267372 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.




## Immunoprecipitation - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) was immunoprecipitated from 0.35 mg HeLa (human cervix adenocarcinoma epithelial cell ) treated with 100nM calyculin A for 30 minutes, whole cell lysate 20 µg with ab267372 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab267372 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.
**Lane 1**: HeLa treated with 100nM calyculin A for 30 minutes, whole cell lysate 20 µg

**Lane 2**: ab267372 IP in HeLa treated with 100nM calyculin A for 30 minutes whole cell lysate

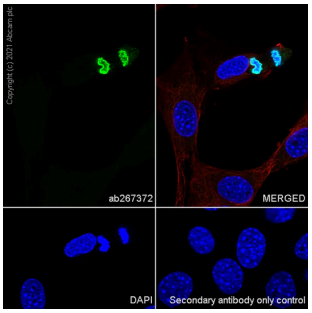
**Lane 3**: Rabbit monoclonal IgG (ab172730) instead of ab267372 in HeLa treated with 100nM calyculin A for 30 minutes whole cell lysate

Blocking and dilution buffer and concentration: 5% BSA/TBST

Exposure time: 5.5 seconds

All lanes:
Immunoprecipitation - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

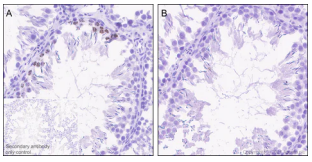
Predicted band size: 15 kDa




## Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H3 (phospho S10) antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 cells labelling Histone H3 (phospho S10) with ab267372 at 1/1000 (0.54 µg/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in NIH/3T3 cells in M phase. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

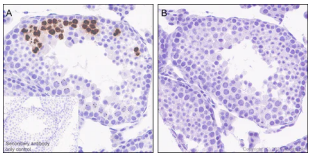



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 (phospho S10) antibody

Immunohistochemical analysis of paraffin-embedded rat testis tissue labelling Histone H3 (phospho S10) with ab267372 at 1/5000 (0.108 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on rat testis without alkaline phosphatase treatment (image A). No signal was detected when tissues were treated with alkaline phosphatase (image B). The section was incubated with ab267372 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

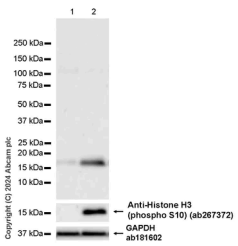


## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 (phospho S10) antibody

Immunohistochemical analysis of paraffin-embedded mouse testis tissue labelling Histone H3 (phospho S10) with ab267372 at 1/5000 (0.108 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on mouse testis without alkaline phosphatase treatment (image A). No signal was detected when tissues were treated with alkaline phosphatase (image B). The section was incubated with ab267372 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.




## Western blot - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Western blot staining using rabbit Anti-Histone H3 (phospho S10) antibody

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 9859993).

Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372) at 1/1000 dilution was used as a control for nocodazole induced cell cycle arrest.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-Survivin antibody [RM1086] (ab316022) at 1/1000 dilution

Lane 1:
Untreated HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

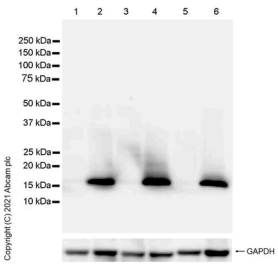
Lane 2:
HeLa treated with 400ng/ml nocodazole for 20 hours whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 16 kDa, 36 kDa, 15 kDa

Exposure time: 180s




## Western blot - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Histone H3 (phospho S10) Western blot staining using rabbit Anti-Histone H3 (phospho S10) antibody

Blocking and diluting buffer and concentration: 5% BSA/TBST
Exposure time: 3 seconds

All lanes:
Western blot - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell ), whole cell lysate at 20 µg

Lane 2:
HeLa treated with 100nM calyculin A for 30 min, whole cell lysate at 20 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast), whole cell lysate at 20 µg

Lane 4:
NIH/3T3 treated with 100nM calyculin A for 30 min, whole cell lysate at 20 µg

Lane 5:

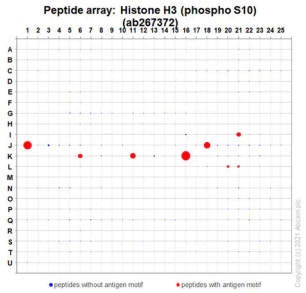
C6 (rat glial tumor glial cell), whole cell lysate at 20 µg

Lane 6:
C6 treated with 100nM calyculin A for 30 min, whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 15 kDa




## Peptide Array - Anti-Histone H3 (phospho S10) antibody [EPR24060-36] (ab267372)

Peptide array analysis of ab267372 at (0.02µg/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Fluo 647nm conjugated at 1/50,000 dilution.
All batches of ab267372 are tested in Peptide Array against 501 different modified and unmodified histone peptides; each peptide is printed on the array at six concentrations (each in triplicate). Circle area represents affinity between the antibody and a peptide: all antigen-containing peptides are displayed as red circles, all other peptides as blue circles. The affinity is calculated as the area under the curve when antibody binding values are plotted against the corresponding peptide concentration. Each circle area is normalized to the peptide with the strongest affinity.

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