

# Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade ab177191

リコンビナント **RabMAb**

画像数 7

### 製品の概要

|              |   |
|--------------|---|
| 製品名          | Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade  |
| 製品の詳細        | Rabbit monoclonal [EPR16998(2)] to Histone H4 (acetyl K20) - ChIP Grade   |
| 由来種          | Rabbit  |
| アプリケーション     | <b>適用あり:</b> ChIP-sequencing, ICC/IF, WB  |
| 種交差性         | <b>交差種:</b> Mouse, Human  |
| 免疫原          | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.   |
| ポジティブ・コントロール | WB: HeLa whole cell lysates untreated and treated with 500 ng/ml TSA for 4 hours; NIH/3T3 whole cell lysates untreated and treated with 500 ng/ml TSA for 4 hours; ICC/IF: HeLa and NIH/3T3 cells treated with Trichostatin A (500 ng/ml) for 4 hours; ChIP-seq: Chromatin from HeLa cells.   |
| 特記事項         | <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> |

### 製品の特性

|       |   |
|-------|---|
| 製品の状態 | Liquid  |
| 保存方法  | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. |
| バッファー | Preservative: 0.01% Sodium azide<br>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA                          |
| 精製度   | Protein A purified  |
| ポリ/モノ | モノクローナル   |
| クローン名 | EPR16998(2)   |

## アプリケーション

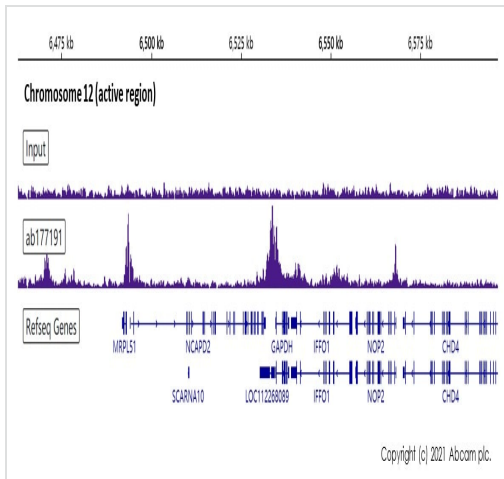
**The Abpromise guarantee** Abpromise保証は、次のテスト済みアプリケーションにおけるab177191の使用に適用されます  
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご確認ください。

| アプリケーション        | Abreviews | 特記事項   |
|-----------------|-----------|--|
| ChIP-sequencing |           | Use 4µg for 10 <sup>7</sup> cells.   |
| ICC/IF          |           | 1/500.   |
| WB              |           | 1/1000. Detects a band of approximately 11 kDa (predicted molecular weight: 11 kDa). |

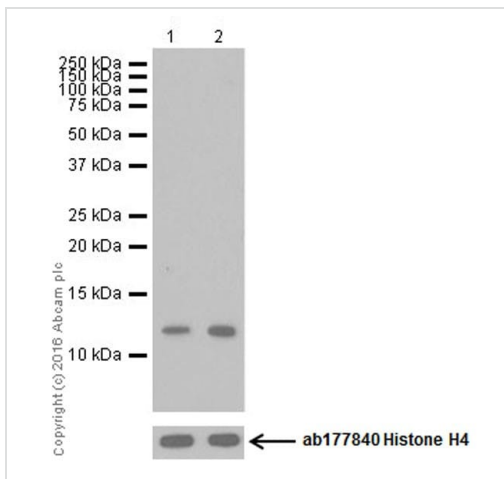
## ターゲット情報

|       |  |
|-------|--|
| 機能    | 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.   |
| 配列類似性 | Belongs to the histone H4 family.  |
| 翻訳後修飾 | <p>Acetylation at Lys-6 (H4K5ac), Lys-9 (H4K8ac), Lys-13 (H4K12ac) and Lys-17 (H4K16ac) occurs in coding regions of the genome but not in heterochromatin.</p> <p>Citrullination at Arg-4 (H4R3ci) by PAD4 impairs methylation.</p> <p>Monomethylation and asymmetric dimethylation at Arg-4 (H4R3me1 and H4R3me2a, respectively) by PRMT1 favors acetylation at Lys-9 (H4K8ac) and Lys-13 (H4K12ac).</p> <p>Demethylation is performed by JMJD6. Symmetric dimethylation on Arg-4 (H4R3me2s) by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage.</p> <p>Monomethylated, dimethylated or trimethylated at Lys-21 (H4K20me1, H4K20me2, H4K20me3).</p> <p>Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing.</p> <p>Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins. Monoubiquitinated at Lys-92 of histone H4 (H4K91ub1) in response to DNA damage. The exact role of H4K91ub1 in DNA damage response is still unclear but it may function as a licensing signal for additional histone H4 post-translational modifications such as H4 Lys-21 methylation (H4K20me).</p> <p>Sumoylated, which is associated with transcriptional repression.</p> |
| 細胞内局在 | Nucleus. Chromosome.   |

## 画像



ChIP-sequencing - Anti-Histone H4 (acetyl K20)  
antibody [EPR16998(2)] - ChIP Grade (ab177191)



Western blot - Anti-Histone H4 (acetyl K20) antibody  
[EPR16998(2)] - ChIP Grade (ab177191)

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  $\mu$ g of ab177191 [EPR16998(2)]. 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](#).

**All lanes :** Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191) at 1/1000 dilution

**Lane 1 :** Untreated HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

**Lane 2 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4 hours

Lysates/proteins at 10  $\mu$ g per lane.

## Secondary

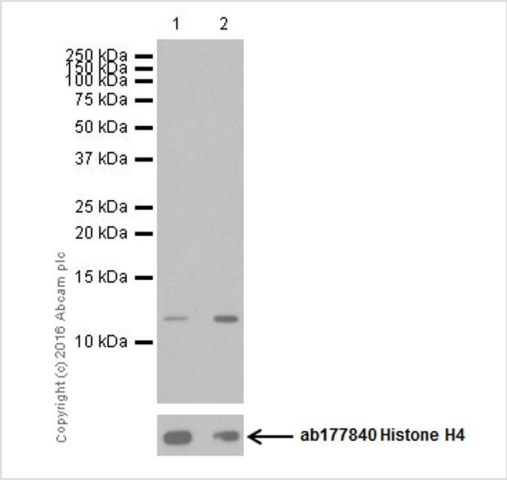
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

**Predicted band size:** 11 kDa

**Observed band size:** 11 kDa

**Exposure time:** 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191)

**All lanes :** Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191) at 1000 cells

**Lane 1 :** Untreated NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

**Lane 2 :** NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate treated with 500 ng/ml TSA for 4 hours

Lysates/proteins at 10 µg per lane.

**Secondary**

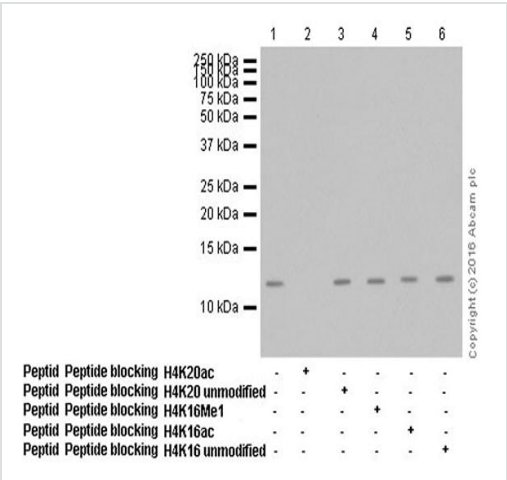
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

**Predicted band size:** 11 kDa

**Observed band size:** 11 kDa

**Exposure time:** 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191)

**All lanes :** Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191) at 1/1000 dilution

**Lane 1 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4 hours

**Lane 2 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4 hours with H4K20ac peptide

**Lane 3 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4 hours with H4K20 unmodified peptide

**Lane 4 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4 hours with H4K16Me1 peptide

**Lane 5 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4

hours with H4K16ac peptide

**Lane 6 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 500 ng/ml TSA for 4 hours with H4K16 unmodified peptide

Lysates/proteins at 10 µg per lane.

### Secondary

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

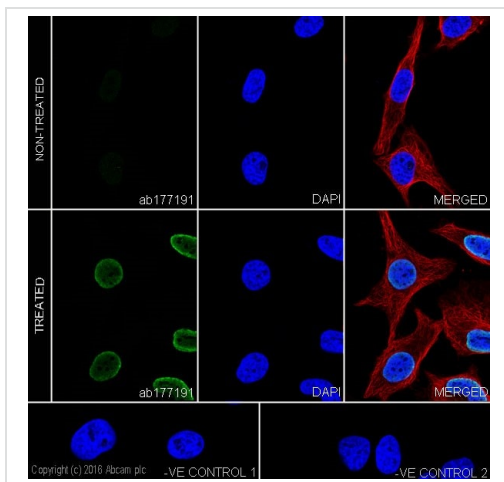
**Predicted band size:** 11 kDa

**Observed band size:** 11 kDa

**Exposure time:** 5 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

5 µg peptide is used in each lane of the blocking experiment



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Histone H4 (acetyl K20) with ab177191 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

The expression increased on HeLa cells after treatment with Trichostatin A (500 ng/ml) for 4 hours.

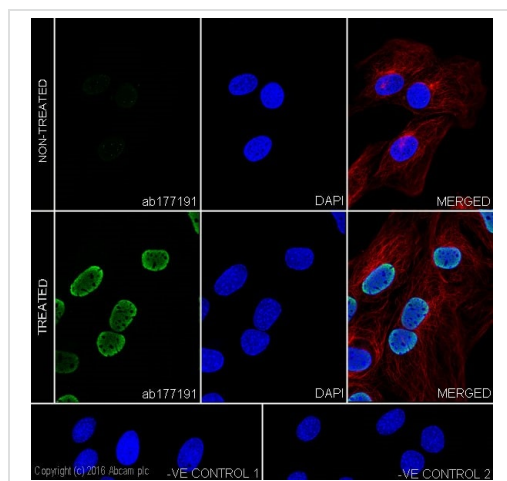
The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (**ab7291**) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:

-ve control 1: ab177191 at 1/500 dilution followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody at 1/1000 dilution.

-ve control 2: Anti-alpha Tubulin mouse MAb (**ab7291**) at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K20) antibody [EPR16998(2)] - ChIP Grade (ab177191)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling Histone H4 (acetyl K20) with ab177191 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green).

The expression increased on NIH/3T3 cells after treatment with Trichostatin A (500 ng/ml) for 4 hours.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb ([ab7291](#)) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) ([ab150120](#)) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:

-ve control 1: ab177191 at 1/500 dilution followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) ([ab150120](#)) secondary antibody at 1/1000 dilution.

-ve control 2: Anti-alpha Tubulin mouse MAb ([ab7291](#)) at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)) secondary antibody at 1/1000 dilution.

Why choose a recombinant antibody?

**Research with confidence**  
Consistent and reproducible results

**Long-term and scalable supply**  
Recombinant technology

**Success from the first experiment**  
Confirmed specificity

**Ethical standards compliant**  
Animal-free production

Anti-Histone H4 (acetyl K20) antibody  
[EPR16998(2)] - ChIP Grade (ab177191)

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