**Product datasheet**

**Anti-Histone H4 (acetyl K12) antibody ab61238**

*Overview*

**Product name**  
Anti-Histone H4 (acetyl K12) antibody

**Description**  
Rabbit polyclonal to Histone H4 (acetyl K12)

**Host species**  
Rabbit

**Specificity**  
ab61238 detects endogenous levels of Histone H4 only when acetylated at lysine 12.

**Tested applications**  
Suitable for: ELISA, IHC-P, WB, ICC/IF

**Species reactivity**  
Reacts with: Mouse, Human, Drosophila melanogaster  
Predicted to work with: Rat

**Immunogen**  
Synthetic peptide corresponding to Human Histone H4 aa 10-15 (acetyl K12). Synthetic acetylated peptide derived from human Histone H4 around the acetylation site of lysine 12 LGK(Ac)GG

Sequence:  
LGK(Ac)GG

Database link: P62805

**Positive control**  
Human breast carcinoma tissue (IHC-P). Extracts of COS7 cells treated with TSA (400nM, 24hours) (WB).

*Properties*

**Form**  
Liquid

**Storage instructions**  
Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.

**Storage buffer**  
pH: 7.40  
Preservative: 0.02% Sodium azide  
Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride

Without Mg2+ and Ca2+

**Purity**  
Immunogen affinity purified

**Clonality**  
Polyclonal

**Isotype**  
IgG
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.

Sequence similarities
Belongs to the histone H4 family.

Post-translational modifications
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.
Citrullination at Arg-4 (H4R3ci) by PADI4 impairs methylation.
Monomethylation and asymmetric dimethylation at Arg-4 (H4R3me1 and H4R3me2a, respectively) by PRMT1 favors acetylation at Lys-9 (H4K8ac) and Lys-13 (H4K12ac).
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.
Monomethylated, dimethylated or trimethylated at Lys-21 (H4K20me1, H4K20me2, H4K20me3). Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing.
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).
Sumoylated, which is associated with transcriptional repression.

Cellular localization
Nucleus. Chromosome.

Applications
Our Abpromise guarantee covers the use of ab61238 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<th>Application</th>
<th>Abviews</th>
<th>Notes</th>
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<td>ELISA</td>
<td>1/5000.</td>
<td></td>
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<tr>
<td>IHC-P</td>
<td>1/50 - 1/100.</td>
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<tr>
<td>WB</td>
<td>1/500 - 1/1000. Detects a band of approximately 11 kDa (predicted molecular weight: 11 kDa).</td>
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<tr>
<td>ICC/IF</td>
<td>1/500 - 1/1000.</td>
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Images
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K12) antibody (ab61238)

Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue using Histone H4 (acetyl K12) antibody (ab61238) at 1/50 - 1/100 dilution, in the presence (right panel) and absence (left panel) of acetylated peptide.

Western blot - Anti-Histone H4 (acetyl K12) antibody (ab61238)

**All lanes**: Anti-Histone H4 (acetyl K12) antibody (ab61238) at 1/500 dilution

**Lane 1**: Extracts from COS7 cells, treated with TSA (400nM, 24hours) with no acetylated peptide

**Lane 2**: Extracts from COS7 cells, treated with TSA (400nM, 24hours) with acetylated peptide

**Predicted band size**: 11 kDa

**Observed band size**: 11 kDa

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