


# Histone H4 (acetyl K12) Quantification Kit (Colorimetric) ab115122

### 概述

产品名称	Histone H4 (acetyl K12) Quantification试剂盒(Colorimetric)
检测方法	Colorimetric
样品类型	Tissue, Adherent cells, Suspension cells
灵敏度	2 ng/well
范围	2 ng/well - 5000 ng/well
检测时间	2h 30m
种属反应性	与反应: Mouse, Human 预测可用于: Mammals 

### 产品概述

Acetylation of histones such histone H4 has been involved in the regulation of chromatin structure and the recruitment of transcription factors to gene promoters. HATs (histone acetyltransferases) and HDACs (histone deacetylases) play a critical role in controlling histone H4 acetylation. Histone H4 (acetyl K12) reflects the hyperacetylated state in histone H4 and strongly correlates with active state of genes. H4 (acetyl K12) has been observed in cancer and inflammatory diseases.

Abcam's Histone H4 (acetyl K12) Quantification Kit (Colorimetric) (ab115122) allows the experimenter to measure global acetylation of histone H4K12 quickly and consistently. The kit is ready-to-use and provides all the essential components needed to carry out a successful assay experiment and it is suitable for specifically measuring global histone H4K12 acetylation using a variety of mammalian cells including fresh and frozen tissues, and cultured adherent and suspension cells.

平台	Microplate reader
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### 性能

存放说明 Please refer to protocols.

组件	标识符	48 tests	96 tests
10X Wash Buffer		1 x 10ml	1 x 20ml
8-Well Sample Strips (with Frame)		4 units	9 units

组件	标识符	48 tests	96 tests
8-Well Standard Control Strips	Green Ringed	2 units	3 units
Antibody Buffer		1 x 6ml	1 x 12ml
Color Developer		1 x 5ml	1 x 10ml
Detection Antibody, 1 mg/mL		1 x 5µl	1 x 10µl
Signal Enhancer		1 x 120µl	1 x 240µl
Signal Report Solution		1 x 5µl	1 x 10µl
Standard Control, 100 µg/mL		1 x 10µl	1 x 20µl
Stop Solution		1 x 3ml	1 x 6ml

**功能** 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.

**序列相似性** Belongs to the histone H4 family.

**翻译后修饰** 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 PAD4 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.

**细胞定位** Nucleus. Chromosome.

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

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