


Histone H4 (mono-methyl K20) Quantification Kit (Colorimetric)

ab115093

製品の概要

製品名	Histone H4 (mono-methyl K20) Quantification Kit (Colorimetric)
検出方法	Colorimetric
サンプルの種類	Tissue, Adherent cells, Suspension cells
検出感度	5 ng/well
検出範囲	20 ng/well - 2000 ng/well
全工程の試験時間	2h 30m
種交差性	交差種: Mouse, Human 交差が予測される動物種: Mammals 

製品の概要	<p>Methylation of histone H4 at lysine 20 is catalyzed by SET9 and SUV4.20h among other methyl transferases in mammalian cells. H4 (mono-methyl K20) is involved in the maintenance of the proper higher order structure of DNA and is consequently essential for chromosome condensation. It is also involved in gene silencing.</p> <p>Histone H4 (mono-methyl K20) Quantification Kit (Colorimetric) (ab115093) enables the user to measure global mono-methylation of histone H4K20. The global H4K20 mono-methylation can also be changed by inhibition or activation of HMTs, making quantitative detection of global mono-methyl histone H4K20 useful in developing a better understanding of epigenetic regulation of gene activation/repression and for developing HMT-targeted drugs. ab115093 is suitable for use with a variety of mammalian cells including fresh and frozen tissues, and cultured adherent and suspension cells.</p>
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試験プラットフォーム	Microplate reader
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製品の特性

保存方法	Please refer to protocols.
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内容	ラベル	48 tests	96 tests
10X Wash Buffer		1 x 10ml	1 x 20ml
8-Well Sample Strips (with Frame)		4 units	9 units

内容	ラベル	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
Detecting 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

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). 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.

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