

## Product datasheet

# Anti-Histone H4 (mono methyl K20) antibody [mAbcam 16974] ab16974

画像数 3

### 製品の概要

製品名	Anti-Histone H4 (mono methyl K20) antibody [mAbcam 16974]
製品の詳細	Mouse monoclonal [mAbcam 16974] to Histone H4 (mono methyl K20)
由来種	Mouse
アプリケーション	<b>適用あり:</b> WB, Flow Cyt
種交差性	<b>交差種:</b> Human
免疫原	Synthetic peptide within Human Histone H4 aa 1-100 (mono methyl K20). The exact sequence is proprietary. (Peptide available as <a href="#">ab17043</a> )
ポジティブ・コントロール	This antibody gave a positive signal in methanol fixed/Tween permeabilised HeLa cells in Flow Cytometry.
特記事項	This antibody clone is manufactured by Abcam.  If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a> or you can find further information <a href="#">here</a> .

### 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 or -80°C. Avoid freeze / thaw cycle.
バッファー	pH: 7.50 Preservative: 0.02% Sodium azide Constituents: 5.88% Sodium citrate, Tris HCl, 2.9% Sodium chloride
精製度	IgG fraction
ポリ/モノ	モノクローナル
クローン名	mAbcam 16974
アイソタイプ	IgG1
軽鎖の種類	kappa

## アプリケーション

Our [Abpromise guarantee](#) covers the use of **ab16974** in the following tested applications.

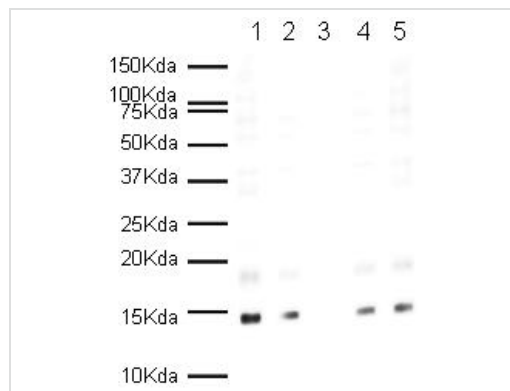
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Abreviews	特記事項
WB		Use a concentration of 10 µg/ml. Detects a band of approximately 15 kDa (predicted molecular weight: 15 kDa). Can be blocked with <a href="#">Human Histone H4 (mono methyl K20) peptide (ab17043)</a> .
Flow Cyt		Use 2µg for 10 <sup>6</sup> cells. <a href="#">ab170190</a> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

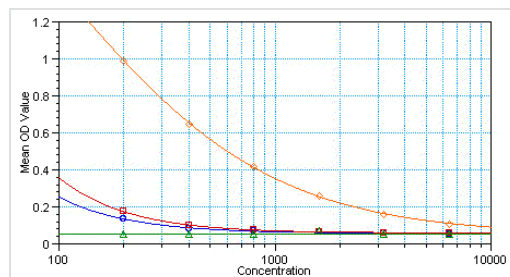
## ターゲット情報

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	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. Citullination 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. Phosphorylated by PAK2 at Ser-48 (H4S47ph). This phosphorylation increases the association of H3.3-H4 with the histone chaperone HIRA, thus promoting nucleosome assembly of H3.3-H4 and inhibiting nucleosome assembly of H3.1-H4. 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. Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes.
細胞内局在	Nucleus. Chromosome.

## 画像



Western blot - Anti-Histone H4 (mono methyl K20)  
antibody [mAbcam 16974] (ab16974)



ELISA - Anti-Histone H4 (mono methyl K20)  
antibody [mAbcam 16974] (ab16974)

ELISA using ab16974 at antibody concentrations between 1/100 and 1/10000.

The orange line indicates binding to the Histone H4 peptide - mono methyl K20 ([ab17043](#)).

Binding to the following peptides was either not seen or was very weak:

Histone H4 peptide - tri methyl K20

([ab17567](#)) - green line,

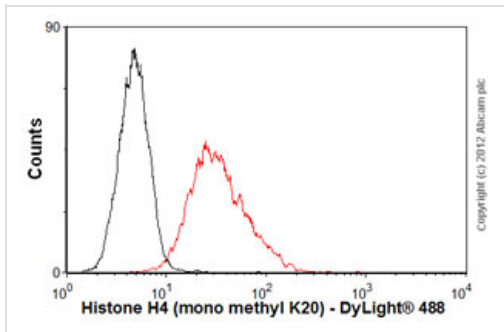
Histone H4 peptide - di methyl K20

([ab14964](#)) - blue line,

Histone H4 peptide - unmodified ([ab2622](#)) -

red line.

This indicates the specificity of [ab16974](#) for mono methyl K20 of Histone H4.



Flow Cytometry - Anti-Histone H4 (mono methyl K20) antibody [mAbcam 16974] (ab16974)

Overlay histogram showing HeLa cells stained with ab16974 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab16974, 2 $\mu$ g/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2 $\mu$ g/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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