



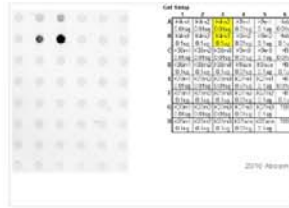
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Human Histone H3 (tri methyl K4) peptide (ab1342)

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Applications: BL, Dot



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★★★★★ 1 review

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Applications: BL, Dot

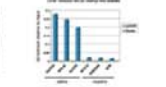


Human Histone H3 (tri methyl K27) peptide (ab1782)

★★★★★ 1 review

[References \(5\)](#)

Applications: BL, Dot



Anti-Histone H3 (tri methyl K4) antibody - ChIP Grade (ab8580)

★★★★★ 76 reviews

[References \(987\)](#)

Applications: ChIP, ChIP/Chp, ChIPseq, Flow Cyt, ICC, ICC/F...

Species: Mouse, Rat, Rabbit, Human, Pig, Saccharomyces cerevisiae...

- [Datasheet](#)
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Overview

[Customer reviews and FAQs](#)

Product name Human Histone H3 (tri methyl K4) peptide
[See all Histone H3 proteins and peptides](#)

Description

Nature Synthetic

Amino Acid Sequence

Species Human

Modifications tri methyl K4

Associated products

- Coimmunogen** [Anti-Histone H3 \(tri methyl K4\) antibody - ChIP Grade \(ab8580\)](#)
- Corresponding Antibody** [Anti-Histone H3 \(tri methyl K4\) antibody \[mAbcam12209\] - ChIP Grade \(ab12209\)](#)
[Anti-Histone H3 \(tri methyl K4\) antibody - ChIP Grade \(ab8580\)](#)
- Related Products** [Anti-Histone H3 \(tri methyl K4\) antibody \[mAbcam1012\] - ChIP Grade \(ab1012\)](#)
[Anti-Histone H3 \(di methyl K9\) antibody \[mAbcam 1220\] - ChIP Grade \(ab1220\)](#)
[Human Histone H3 \(mono methyl K4\) peptide \(ab1340\)](#)
[Anti-Histone H3 \(di methyl K4, tri methyl K4\) antibody \[mAbcam 6000\] - ChIP Grade \(ab6000\)](#)
[Anti-Histone H3 \(tri methyl K27\) antibody \[mAbcam 6002\] - ChIP Grade \(ab6002\)](#)
[Anti-Histone H3 \(di methyl K4\) antibody - ChIP Grade \(ab7766\)](#)
[Anti-Histone H3 \(mono methyl K4\) antibody - ChIP Grade \(ab8895\)](#)

Specifications

Our [Abpromise guarantee](#) covers the use of **ab1342** in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations

Product code ab1342

Size	Price
100 µg	\$185

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should be determined by the end user.

Applications	Dot blot Blocking - Blocking peptide for Anti-Histone H3 (Tri methyl K4) antibody - ChIP Grade (ab8580), Anti-Histone H3 (Tri methyl K4) antibody [mAbcam12209] - ChIP Grade (ab12209)
Form	Liquid
Additional notes	<ul style="list-style-type: none">- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.
Concentration	100 µg at 1 mg/ml

Preparation and Storage

Stability and Storage	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. Information available upon request.
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General Info

Alternative names	HIST1 cluster, H3J Histone gene cluster 1, H3 histone family, member E Histone gene cluster 1, H3G see all
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 H3 family.
Developmental stage	Expressed during S phase, then expression strongly decreases as cell division slows down during the process of differentiation.
Post-translational modifications	<p>Acetylation is generally linked to gene activation. Acetylation on Lys-10 (H3K9ac) impairs methylation at Arg-9 (H3R8me2s). Acetylation on Lys-19 (H3K18ac) and Lys-24 (H3K24ac) favors methylation at Arg-18 (H3R17me).</p> <p>Citrullination of Arg-9 (H3R8ci) and/or Arg-18 (H3R17ci) by PADI4 impairs methylation and represses transcription.</p> <p>Asymmetric dimethylation at Arg-18 (H3R17me2a) by CARM1 is linked to gene activation. Symmetric dimethylation at Arg-9 (H3R8me2s) by PRMT5 is linked to gene repression. Asymmetric dimethylation at Arg-3 (H3R2me2a) by PRMT6 is linked to gene repression and is mutually exclusive with H3 Lys-5 methylation (H3K4me2 and H3K4me3).</p> <p>H3R2me2a is present at the 3' of genes regardless of their transcription state and is enriched on inactive promoters, while it is absent on active promoters.</p> <p>Methylation at Lys-5 (H3K4me), Lys-37 (H3K36me) and Lys-80 (H3K79me) are linked to gene activation. Methylation at Lys-5 (H3K4me) facilitates subsequent acetylation of H3 and H4. Methylation at Lys-80 (H3K79me) is associated with DNA double-strand break (DSB) responses and is a specific target for TP53BP1. Methylation at Lys-10 (H3K9me) and Lys-28 (H3K27me) are linked to gene repression. Methylation at Lys-10 (H3K9me) is a specific target for HP1 proteins (CBX1, CBX3 and CBX5) and prevents subsequent phosphorylation at Ser-11 (H3S10ph) and acetylation of H3 and H4. Methylation at Lys-5 (H3K4me) and Lys-80 (H3K79me) require preliminary monoubiquitination of H2B at 'Lys-120'. Methylation at Lys-10 (H3K9me) and Lys-28 (H3K27me) are enriched in inactive X chromosome chromatin.</p> <p>Phosphorylated at Thr-4 (H3T3ph) by GSG2/haspin during prophase and dephosphorylated during anaphase. Phosphorylation at Ser-11 (H3S10ph) by AURKB is crucial for chromosome condensation and cell-cycle progression during mitosis and meiosis. In addition phosphorylation at Ser-11 (H3S10ph) by RPS6KA4 and RPS6KA5 is important during interphase because it enables the transcription of genes following external stimulation, like mitogens, stress, growth factors or UV irradiation and result in the activation of genes, such as c-fos and c-jun. Phosphorylation at Ser-11 (H3S10ph), which is linked to gene activation, prevents methylation at Lys-10 (H3K9me) but facilitates acetylation of H3 and H4. Phosphorylation at Ser-11 (H3S10ph) by AURKB mediates the dissociation of HP1 proteins (CBX1, CBX3 and CBX5) from heterochromatin. Phosphorylation at Ser-11 (H3S10ph) is also an essential regulatory mechanism for neoplastic cell transformation. Phosphorylated at Ser-29 (H3S28ph) by MLTK isoform 1, RPS6KA5 or AURKB during mitosis or upon ultraviolet B irradiation.</p>

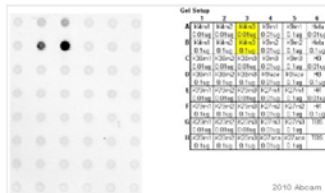
Phosphorylation at Thr-7 (H3T6ph) by PRKCB8 is a specific tag for epigenetic transcriptional activation that prevents demethylation of Lys-5 (H3K4me) by LSD1/KDM1A. At centromeres, specifically phosphorylated at Thr-12 (H3T11ph) from prophase to early anaphase, by DAPK3 and PKN1. Phosphorylation at Thr-12 (H3T11ph) by PKN1 is a specific tag for epigenetic transcriptional activation that promotes demethylation of Lys-10 (H3K9me) by KDM4C/JMJD2C. Phosphorylation at Tyr-42 (H3Y41ph) by JAK2 promotes exclusion of CBX5 (HP1 alpha) from chromatin.

Monoubiquitinated by RAG1 in lymphoid cells, monoubiquitination is required for V(D)J recombination (By similarity). 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.

Cellular localization Nucleus. Chromosome.

Information by UniProt

Human Histone H3 (tri methyl K4) peptide images



ab1342 (at 0.01 and 0.1 µg) used in Dot Blot to test for cross-reactivity of ab8580 (1/2500). An HRP-conjugated Mouse anti-rabbit polyclonal (1/10000) was used as the secondary antibody.

[See Abreview](#)

Dot Blot - Human Histone H3 (tri methyl K4)

peptide (ab1342)

This image is courtesy of an anonymous Abreview

References for Human Histone H3 (tri methyl K4) peptide (ab1342)

This product has been referenced in:

- You Y *et al.* Temporal dynamics of gene expression and histone marks at the Arabidopsis shoot meristem during flowering. *Nat Commun* **8**:15120 (2017). [Read more \[PubMed: 28513600\]](#)
- McLaughlin N *et al.* In situ histone landscape of nephrogenesis. *Epigenetics* **9**:222-35 (2014). [Read more \[PubMed: 24169366\]](#)

See all 12 Publications for this product

Publishing research using ab1342? Please [let us know](#) so that we can cite the reference in this datasheet.

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0 I have checked up your products, however I cannot find the information at Abcam website about their residue sequences, residue positions and purity.

0 I am doing research with the model plant Arabidopsis. I can use the antibodies and peptides derived...

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Abcam community
Verified customer
Asked on Oct 15 2012

A The sequence and purification method is propriety, but if you let me know what is important for you I can check if one of our product fits.

Abcam Scientific Support
Answered on Oct 15 2012

0 Do you have any full size of H3K4 mono-, di- and tri methylated histone 3 which I can load on the gel as positive control.

Abcam community
Verified customer
Asked on Feb 14 2012

>The molecular weights of the different methylation states be extremely difficult to distinguish as that type of modification creates a 14Dalton mass change. Currently, we do not offer full length methylated H3K4 proteins. We do have anEpiSeeker Histon...

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Abcam Scientific Support
Answered on Feb 14 2012

0

We have your antibodies against Histone H3K4 methylation (ab8895 for monomethylation and ab8580 for trimethylation). I would like to see their specificity on WB. Do you have any WB data loading Histon H3 unmodified, monomethylated H3K4, dimethylated H...

[Read More](#)

Abcam community
Verified customer
Asked on Feb 13 2012

Peptides are available for both of these products. The peptide for ab8895, Anti-Histone H3 (mono methyl K4) antibody - CHIP Grade, is product number ab1340 (<http://www.abcam.com/histone-h3-peptide-mono-methyl-k4-ab1340.html>). The peptide for ab8580, Anti...

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Abcam Scientific Support
Answered on Feb 13 2012

0

Other (Dot Blot) Abreview for Histone H3 peptide - tri methyl K4

★★★★★ Excellent

Application Other

Review text: I used this product to do a dot blot specificity test for cross reactivity of modified histone antibodies and everything worked great. I made two dilutions of the peptide and spotted it on a nitrocellulose membrane using a Bio-Dot apparatus. Once the peptides were bound to the membrane I incubated with the appropriate primary and secondary antibodies at an assay dependent concentration and developed using ECL.

Sample: Human Purified protein

Primary antibody (in addition to 'Histone H3 peptide - tri methyl K4')

Primary antibody: Abcam primary antibody: [Anti-Histone H3 \(methylated\) \(tri methyl K4\) antibody \(ab8580\)](#)

Dilution: 1/2500

Secondary antibody

Name: Non-Abcam antibody was used: anti-rabbit

Host species: Mouse

Clonality: Polyclonal

Conjugation: Horse Radish Peroxidase

Dilution: 1/10000



Abcam user community
Verified customer
Submitted Nov 01 2010

0

I am writing to find out how the specificity of the antibodies I purchased were determined. I bought: Histone H3 (mono methyl K4) antibody - CHIP Grade (ab8895) Histone H3 (tri methyl K4) antibody - CHIP Grade (ab8580) Histone H3 (di methyl K4) an...

[Read More](#)

Abcam community
Verified customer
Asked on Apr 06 2005

We do not have a recommended protocol for Dot-blotting but can recommend trying a nitrocellulose membrane, a general manual will be able to help you. Specificity of those antibodies was tested by WB of Histone (ab121) (0.5µg per lane) and with block...

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Abcam Scientific Support
Answered on Apr 07 2005

0



You mention on your web site that your blocking peptides can be coupled to beads via their C-terminal Cys residu. Can you send me more info about that (what kind of beads, by what principle etc.)



0



Abcam community
Verified customer
Asked on Oct 21 2003



The mechanism for coupling the peptides to beads via their terminal cys residue is based on a maleimide reaction scheme. The maleimide group of crosslinkers such as sulfo SMCC (PIERCE) or iodoacetyl moieties on an immobilisation matrix such as Sulfol...



0



Abcam Scientific Support
Answered on Oct 28 2003

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