abcam

Product datasheet

Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free ab239803

リコンビナント RabMAb

画像数 8

製品の概要

製品名	Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free
製品の詳細	Rabbit monoclonal [E173] to Histone H3 (phospho S10 + T11) - BSA and Azide free
由来種	Rabbit
特異性	This antibody detects Histone H3 phosphorylated on both Serine 10 and Threonine 11. However, the antibody shows higher affinity for phosphorylated Serine 10 than for phosphorylated Threonine 11. This was validated by ELISA, Dot Blot and WB peptide blocking experiments.
アプリケーション	**適用あり:** ELISA, Dot blot, WB, ICC/IF, IHC-P, IP **適用なし:** Flow Cyt
種交差性	**交差種:** Mouse, Human **交差が予測される動物種:** Rat, Drosophila melanogaster, a wide range of other species
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	IP: HeLa cell lysate
特記事項	ab239803 is the carrier-free version of **ab32107**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply

- Animal-free production
For more information **see here**.
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C. Do Not Freeze.
バッファー	pH: 7.2 Constituent: PBS
キャリア・フリー	はい
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	E173
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab239803の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
ELISA		Use at an assay dependent concentration.
Dot blot		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 17 kDa (predicted molecular weight: 15 kDa).
ICC/IF		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IP		Use at an assay dependent concentration.

追加情報 Is unsuitable for Flow Cyt.

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 H3 family.

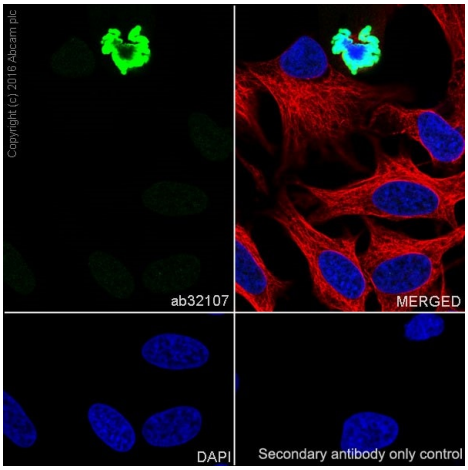
発生段階 Expressed during S phase, then expression strongly decreases as cell division slows down during the process of differentiation.

翻訳後修飾 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).
Citrullination at Arg-9 (H3R8ci) and/or Arg-18 (H3R17ci) by PADI4 impairs methylation and represses transcription.
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). 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.
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.
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. Phosphorylation at Thr-7 (H3T6ph) by PRKCBB 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.

細胞内局在 Nucleus. Chromosome.

画像

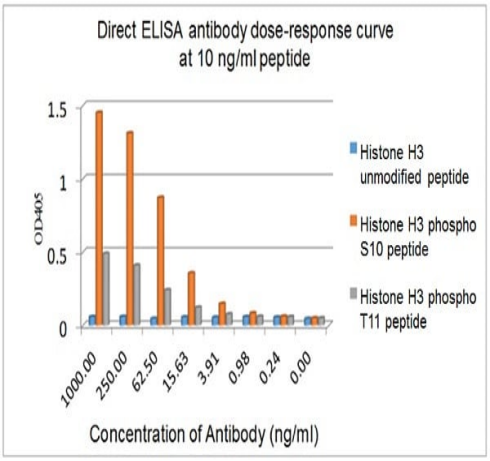
画像



Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling Histone H3 (phospho S10 + T11) with **ab32107** at a dilution of 1/500. Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000, 2 µg/mL) was used as the secondary antibody. Cells were counter-stained with **ab195889** Anti-Alpha Tubulin antibody [DM1A] (1/200, 2.5 µg/mL) - Microtubule Marker (Alexa Fluor® 594). DAPI (blue) was used as a nuclear counterstain.
Confocal image showing nuclear staining on mitotic HeLa cell.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).



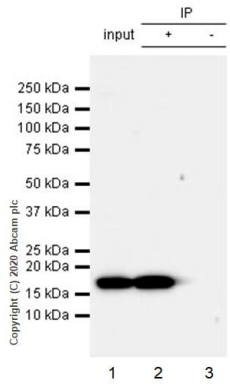
ELISA - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

Direct ELISA antibody dose-response curve using **ab32107** (0-1000 ng/mL).

Peptides - Histone H3 unmodified peptide, Histone H3 phospho S10 peptide, Histone H3 phospho T11 peptide (10 ng/mL).

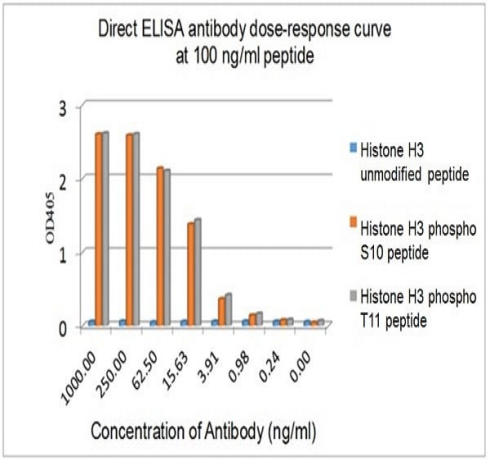
Secondary antibody - Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (1/2500).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).



Immunoprecipitation - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

Purified **ab32107** at 1/50 dilution (2µg) immunoprecipitating Histone H3 in HeLa treated with calyculin A whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) treated with calyculin A whole cell lysate 10µg
Lane 2 (+): **ab32107** + HeLa treated with calyculin A whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab32107** in HeLa treated with calyculin A whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (**ab131366**) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 17 kDa
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).



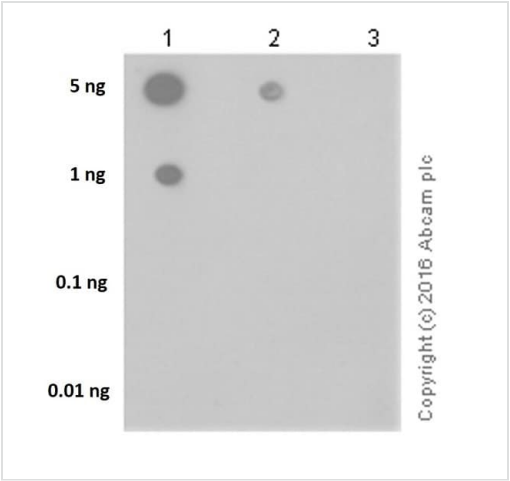
ELISA - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

Direct ELISA antibody dose-response curve using **ab32107** (0-1000 ng/mL).

Peptides - Histone H3 unmodified peptide, Histone H3 phospho S10 peptide, Histone H3 phospho T11 peptide (100 ng/mL).

Secondary antibody - Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (1/2500).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).



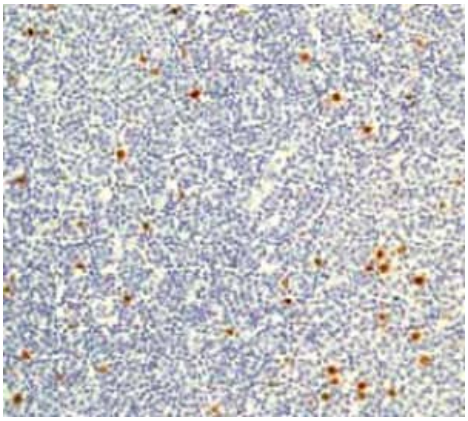
Dot Blot - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

Dot blot analysis of Histone H3 phospho S10 peptide (Lane 1), Histone H3 phospho T11 peptide (Lane 2) and Histone H3 unmodified peptide (Lane 3) labelling Histone H3 (phospho S10 + T11) with ab32107 at a dilution of 1/1000. ab97051 (Peroxidase conjugated goat anti-rabbit IgG) (H+L) was used as the secondary antibody at a dilution of 1/10 000.

Blocking and diluting buffer: 5% NFDM/TBST.

Exposure time: 3 minutes.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).

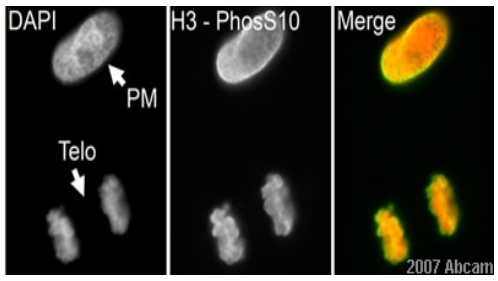


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

Ab32107, at a 1/50 dilution, staining Histone H3 (phospho S10 + T11) in paraffin embedded human lymphoma tissue by Immunohistochemistry.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

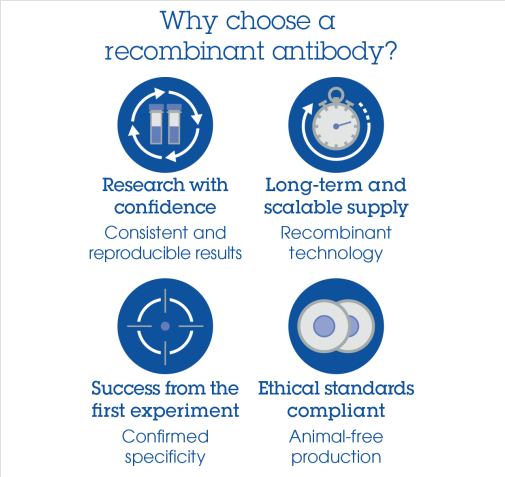


Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (phospho S10 + T11) antibody [E173] - BSA and Azide free (ab239803)

This image is courtesy of an Abreview submitted by Kirk Mcmanus.

ab32107 (1/1000) staining Histone H3 (phospho S10 + T11) in paraformaldehyde-fixed, DAPI counterstained HeLa cells. Secondary antibody: Goat anti-Rabbit IgG conjugated to Cy3® (1/200). Please refer to abreview for further details.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32107**).



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