abcam

Product datasheet

HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] ab195190

リコンビナント RabMAb

2 References 画像数 5

製品の概要

製品名	HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y]
製品の詳細	HRP Rabbit monoclonal [EP854(2)Y] to gamma H2A.X (phospho S139)
由来種	Rabbit
標識	HRP
アプリケーション	**適用あり:** IHC-P, WB
種交差性	**交差種:** Human **交差が予測される動物種:** Mouse, Rat, Sheep
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	WB: Jurkat (Human T cell leukemia T lymphocyte) treated with 25µM Etoposide for 8 hours whole cell lysate; IHC-P: Normal human colon, testis and endometrial adenocarcinoma tissues.
特記事項	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 short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
バッファー	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EP854(2)Y
アイソタイプ	IgG

アプリケーション

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ab195190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
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		1/10000. Detects a band of approximately 15 kDa (predicted molecular weight: 15 kDa).

ターゲット情報

機能 Variant histone H2A which replaces conventional H2A in a subset of nucleosomes. 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. Required for checkpoint-mediated arrest of cell cycle progression in response to low doses of ionizing radiation and for efficient repair of DNA double strand breaks (DSBs) specifically when modified by C-terminal phosphorylation.

配列類似性 Belongs to the histone H2A family.

発生段階 Synthesized in G1 as well as in S-phase.

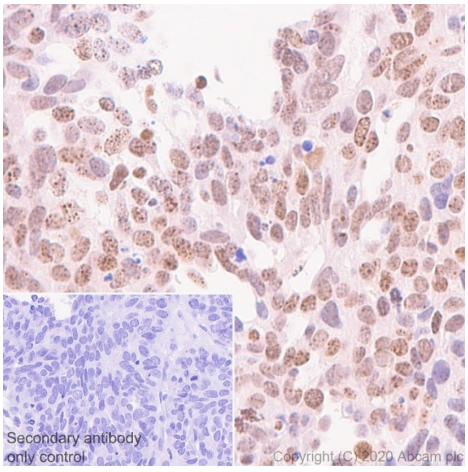
ドメイン The [ST]-Q motif constitutes a recognition sequence for kinases from the PI3/PI4-kinase family.

翻訳後修飾 Phosphorylated on Ser-140 (to form gamma-H2AFX or H2AX139ph) in response to DNA double strand breaks (DSBs) generated by exogenous genotoxic agents and by stalled replication forks, and may also occur during meiotic recombination events and immunoglobulin class switching in lymphocytes. Phosphorylation can extend up to several thousand nucleosomes from the actual site of the DSB and may mark the surrounding chromatin for recruitment of proteins required for DNA damage signaling and repair. Widespread phosphorylation may also serve to amplify the damage signal or aid repair of persistent lesions. Phosphorylation of Ser-140 (H2AX139ph) in response to ionizing radiation is mediated by both ATM and PRKDC while defects in DNA replication induce Ser-140 phosphorylation (H2AX139ph) subsequent to activation of ATR and PRKDC. Dephosphorylation of Ser-140 by PP2A is required for DNA DSB repair. In meiosis, Ser-140 phosphorylation (H2AX139ph) may occur at synaptonemal complexes during leptotene as an ATM-dependent response to the formation of programmed DSBs by SPO11. Ser-140 phosphorylation (H2AX139ph) may subsequently occurs at unsynapsed regions of both autosomes and the XY bivalent during zygotene, downstream of ATR and BRCA1 activation. Ser-140 phosphorylation (H2AX139ph) may also be required for transcriptional repression of unsynapsed chromatin and meiotic sex chromosome inactivation (MSCI), whereby the X and Y chromosomes condense in pachytene to form the heterochromatic XY-body. During immunoglobulin class switch recombination in lymphocytes, Ser-140 phosphorylation (H2AX139ph) may occur at sites of DNA-recombination subsequent to activation of the activation-induced cytidine deaminase AICDA. Phosphorylation at Tyr-143 (H2AXY142ph) by BAZ1B/WSTF determines the relative recruitment of either DNA repair or pro-apoptotic factors. Phosphorylation at Tyr-143 (H2AXY142ph) favors the recruitment of APBB1/FE65 and pro-apoptosis factors such as MAPK8/JNK1, triggering apoptosis. In contrast, dephosphorylation of Tyr-143 by EYA proteins (EYA1, EYA2, EYA3 or EYA4) favors the recruitment of MDC1-

containing DNA repair complexes to the tail of phosphorylated Ser-140 (H2AX139ph). Monoubiquitination of Lys-120 (H2AXK119ub) by RING1 and RNF2/RING2 complex gives a specific tag for epigenetic transcriptional repression. Following DNA double-strand breaks (DSBs), it is ubiquitinated through 'Lys-63' linkage of ubiquitin moieties by the E2 ligase UBE2N and the E3 ligases RNF8 and RNF168, leading to the recruitment of repair proteins to sites of DNA damage. Monoubiquitination and ionizing radiation-induced 'Lys-63'-linked ubiquitination are distinct events.

細胞内局在 Nucleus. Chromosome.

画像



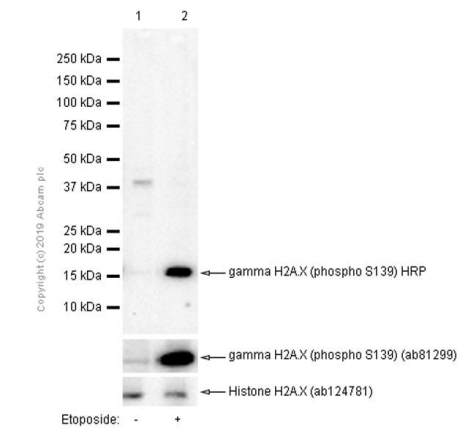
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] (ab195190)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human endometrial adenocarcinoma tissue labelling gamma H2A.X with ab195190 at 5 µg/mL. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 1 (pH 6.0) for 20 minutes. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

Nuclear staining on human endometrial adenocarcinoma.

The section was incubated with ab195190 for 15 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument



Western blot - HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] (ab195190)

All lanes : HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] (ab195190) at 1/10000 dilution

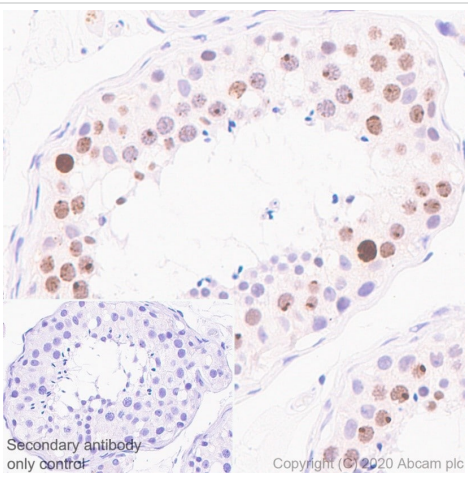
Lane 1 : Untreated Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate
Lane 2 : Jurkat (Human T cell leukemia T lymphocyte) treated with 25µM Etoposide for 8 hours whole cell lysate

Lysates/proteins at 15 µg per lane.

Predicted band size: 15 kDa
Observed band size: 15 kDa

Exposure time: 15 seconds

Blocking/diluting buffer and concentration: 5% NFDM/TBST



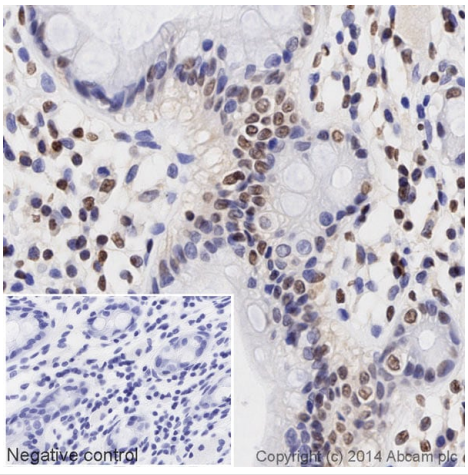
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] (ab195190)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human testis tissue labelling gamma H2A.X with ab195190 at 5 µg/mL. Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 1 (pH 6.0) for 20 minutes. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

Nuclear staining on human testis.

The section was incubated with ab195190 for 15 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

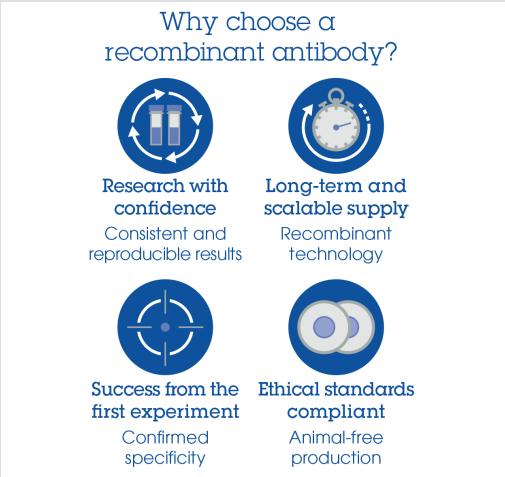


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] (ab195190)

IHC image of Histone H2A.X staining in a section of formalin-fixed paraffin-embedded normal human colon*, performed on a Leica BOND. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab195190, 1/71.4285714285714 dilution, for 15 mins at room temperature. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset negative control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



HRP Anti-gamma H2A.X (phospho S139) antibody [EP854(2)Y] (ab195190)

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