abcam

Product datasheet

Anti-Histone H1.0 antibody [27] ab11080

KO VALIDATED

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Overview

Product name	Anti-Histone H1.0 antibody [27]
Description	Mouse monoclonal [27] to Histone H1.0
Host species	Mouse
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt (Intra)
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Cow, Xenopus laevis, Vertebrata **Does not react with:** Bird
Immunogen	Full length native protein (purified) corresponding to Cow Histone H1.0.
Epitope	This antibody recognises an epitope within aa24-30. Proline 26, which is responsible for a bend in this region, plays an important role in the recognition. See Gorka et al. 1998 for more information.
Positive control	WB: A431, MCF7 and HeLa cell lysates; Histone H1.0 Human Recombinant Protein. IHC-P: Human colon and pancreas adenocarcinoma tissues.
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	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.

Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Purity	Protein G purified
Clonality	Monoclonal
Clone number	27
Myeloma	NS1/1-Ag4-1
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab11080 in the following tested applications.

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

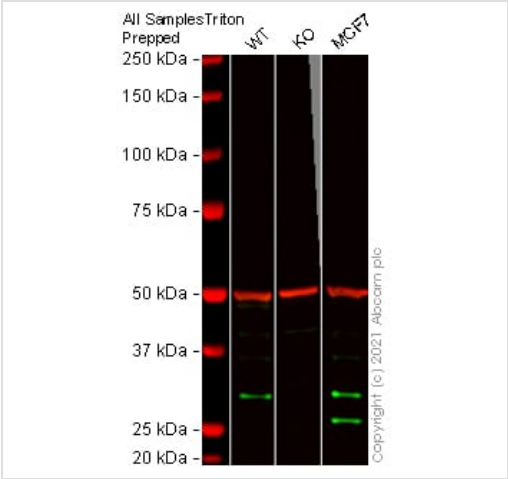
Application	Abreviews	Notes
WB		1/500. Detects a band of approximately 30 kDa (predicted molecular weight: 20 kDa). Linker histones run at about 30kD even though the predicted size is about 20kD.
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt (Intra).

Target

Function	Histones H1 are necessary for the condensation of nucleosome chains into higher-order structures. The H1F0 histones are found in cells that are in terminal stages of differentiation or that have low rates of cell division.
Sequence similarities	Belongs to the histone H1/H5 family. Contains 1 H15 (linker histone H1/H5 globular) domain.
Post-translational modifications	Phosphorylated on Ser-17 in RNA edited version.
Cellular localization	Nucleus. Chromosome. The RNA edited version has been localized to nuclear speckles. During mitosis, it appears in the vicinity of condensed chromosomes.

Images



Western blot - Anti-Histone H1.0 antibody [27] (ab11080)

All lanes : Anti-Histone H1.0 antibody [27] (ab11080) at 1/500 dilution

Lane 1 : Wild-type A431 cell lysate
Lane 2 : H1F0 knockout A431 cell lysate
Lane 3 : MCF7 (Human breast adenocarcinoma cell line) whole cell lysate

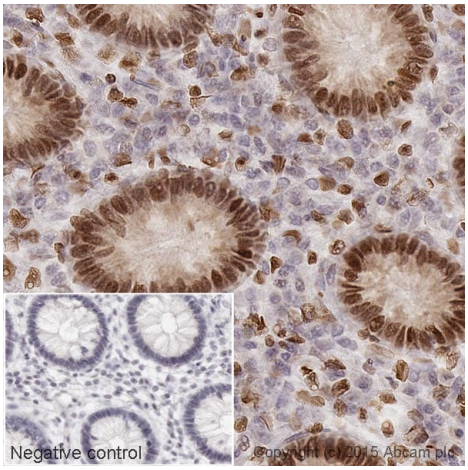
Lysates/proteins at 40 µg per lane.

Performed under reducing conditions.

Predicted band size: 20 kDa
Observed band size: 30 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab11080 observed at 30 kDa. Red - loading control **ab52866** (Rabbit anti-alpha Tubulin antibody [EP1332Y]) observed at 55 kDa.

ab11080 was shown to react with Histone H1.0 in wild-type A431 cells in Western blot with loss of signal observed in H1F0 knockout sample. Wild-type A431 and H1F0 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab11080 and **ab52866** (Rabbit anti-alpha Tubulin antibody [EP1332Y]) overnight at 4°C at a 1 in 500 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (**ab216777**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.

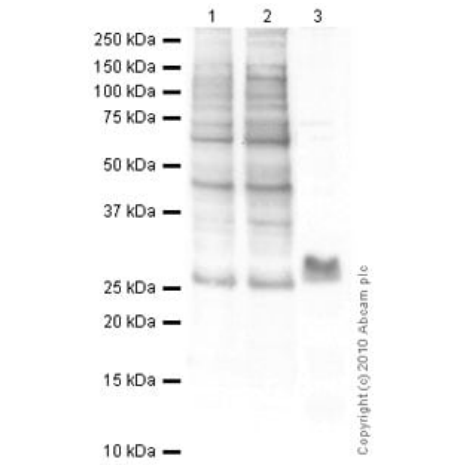


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H1.0 antibody [27] (ab11080)

IHC image of Histone H1 staining in a section of formalin-fixed paraffin-embedded [human normal colon]*. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins. The section was then incubated with ab11080, 1/1000 dilution, for 15 mins at room temperature. A goat anti-mouse biotinylated secondary antibody (**ab6788**, 1/1000 dilution), was used to detect the primary, and visualized using an HRP conjugated ABC system. Streptavidin HRP was used, **ab7403** at a 1/10000 dilution. DAB was used as the chromogen (**ab103723**), diluted 1/100 and incubated for 10min at room temperature. 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



Western blot - Anti-Histone H1.0 antibody [27] (ab11080)

All lanes : Anti-Histone H1.0 antibody [27] (ab11080) at 1/500 dilution

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : HeLa (Human epithelial carcinoma cell line) Nuclear Lysate
Lane 3 : Histone H1.0 Human Recombinant Protein

Lysates/proteins at 30 µg per lane.

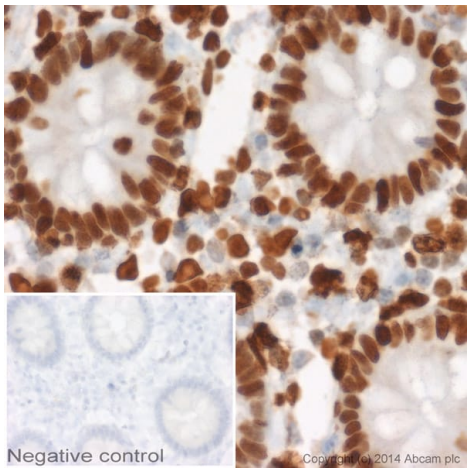
Secondary
All lanes : Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 20 kDa
Observed band size: 30 kDa
Additional bands at: 46 kDa, 65 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 1 minute

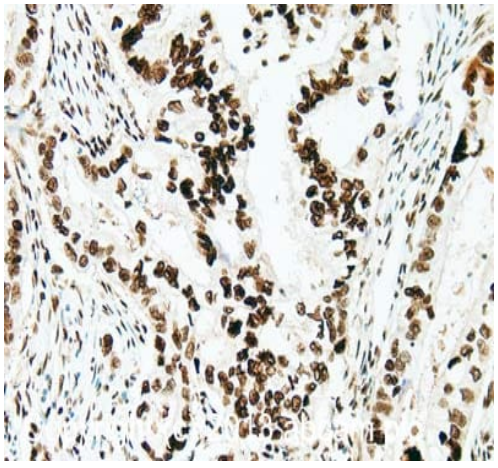


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H1.0 antibody [27] (ab11080)

IHC image of Histone H1.0 staining in human colon formalin fixed paraffin embedded tissue section*. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins. The section was incubated with ab11080, 7.5µg/ml overnight at +4°C. An HRP-conjugated secondary (**ab97240**, 1/2000 dilution) was used for 1hr at room temperature. The section was counterstained with haematoxylin and mounted with DPX.

The inset negative control image is secondary-only at 1/500 dilution.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H1.0 antibody [27] (ab11080)

IHC image of Histone H1.0 staining in Human pancreas adenocarcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab11080, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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.

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