# abcam

## Product datasheet

# Nuclear Marker (Lamin A + C, SC35, KDM1/LSD1, Fibrillarin, HP1 alpha) Antibody Sampler Panel ab263467

12 Images

#### Overview

**Product name** 

Nuclear Marker (Lamin A + C, SC35, KDM1/LSD1, Fibrillarin, HP1 alpha) Antibody Sampler

Species reactivity

Product overview

Reacts with: Human

Nuclear Marker (Lamin A + C, SC35, KDM1/LSD1, Fibrillarin, HP1 alpha) Antibody Sampler Panel ab263467 contains multiple trial-sized versions of anti-human antibody clones against Lamin A + C, SC35, KDM1/LSD1, Fibrillarin and HP1 alpha specifically selected for high performance in various applications. This panel contains 4 recombinant rabbit monoclonal antibodies against Lamin A + C, KDM1/LSD1, Fibrillarin and HP1 alpha and 2 mouse monoclonal antibody against Lamin A + C and SC35. Most of the clones in this panel also react with mouse and rat (please refer to each individual datasheet). They are provided as a sampler panel to allow you to easily evaluate each antibody.

For guidelines on how to use each antibody within the panel, please consult the individual datasheet for each antibody.

#### Panel contains:

- Rabbit monoclonal [EPR4100] to Lamin A + C Nuclear Envelope Marker (20 µL) ab108595
- Mouse monoclonal [4C11] to Lamin A + C (20 μg) ab238303
- Mouse monoclonal [SC-35] to SC35 Nuclear Speckle Marker (20 µg) ab11826
- Rabbit monoclonal [EPR6825] to KDM1 / LSD1 Nuclear Marker (20 µL) ab129195
- Rabbit monoclonal [EPR10823(B)] to Fibrillarin Nucleolar Marker (20 μL) ab166630
- Rabbit monoclonal [EPR5777] to HP1 alpha Heterochromatin marker (20 μL) ab109028

Explore our range of antibody sample panels designed to provide you with a variety of trial-

**Notes** 

size antibodies in a convenient and cost-effective format.

Directly conjugated versions of our antibodies are available and ready to use for multicolor flow cytometry or immunocytochemistry analysis. Please refer to the 'Associated products' section below.

<u>Carrier-free formulations</u> of our recombinant antibodies are also available for easy conjugation to labels of your choice and for multiplex applications. Please refer to the 'Associated products' section below.

#### **Properties**

#### Storage instructions

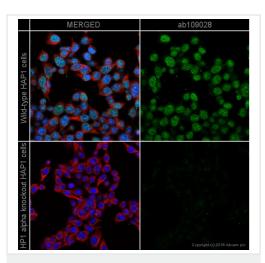
Store at -20°C. Please refer to protocols.

Components	1 kit
ab166630 - Anti-Fibrillarin antibody [EPR10823(B)] - Nucleolar Marker	2 x 10µl
ab109028 - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker	2 x 10µl
ab129195 - Anti-KDM1 / LSD1 antibody [EPR6825] - Nuclear Marker	2 x 10µl
ab238303 - Anti-Lamin A + C antibody [4C11]	2 x 10µg
ab108595 - Anti-Lamin A + C antibody [EPR4100] - Nuclear Envelope Marker	2 x 10µl
ab11826 - Anti-SC35 antibody [SC-35] - Nuclear Speckle Marker	2 x 10µg

#### **Cellular localization**

HP1 alpha: Nucleus. Chromosome. Chromosome > centromere. Component of centromeric and pericentromeric heterochromatin. Associates with chromosomes during mitosis. Associates specifically with chromatin during metaphase and anaphase. Fibrillarin: Nucleus, nucleolus. Fibrillar region of the nucleolus. Lamin A + C: Nucleus. Nucleus envelope. Farnesylation of prelamin-A/C facilitates nuclear envelope targeting and subsequent cleaveage by ZMPSTE24/FACE1 to remove the farnesyl group produces mature lamin-A/C, which can then be inserted into the nuclear lamina. EMD is required for proper localization of non-farnesylated prelamin-A/C. SC35: Nucleus. KDM1/LSD1: Nucleus.

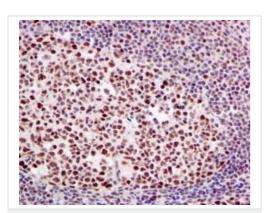
# **Images**



Immunocytochemistry/ Immunofluorescence - Anti-HP1 alpha antibody [EPR5777] - Heterochromatin marker

<u>ab109028</u> staining HP1 alpha in wild-type HAP1 cells (top panel) and HP1 alpha knockout HAP1 cells (bottom panel). The cells were fixed with 4% formaldehyde (10min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with <u>ab109028</u> at 1/250 dilution and <u>ab195889</u> at 1/250 dilution (shown in pseudo colour red) overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to Rabbit IgG (Alexa Fluor® 488) (<u>ab150081</u>) at 2 μg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.

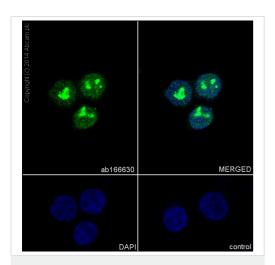
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-HP1 alpha antibody

[EPR5777] - Heterochromatin marker

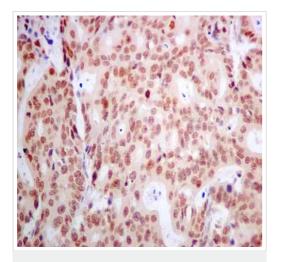
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue using <u>ab109028</u> at a dilution of 1/250.



Immunocytochemistry/ Immunofluorescence - Anti-Fibrillarin antibody [EPR10823(B)] - Nucleolar Marker

Immunocytochemistry/Immunofluorescence analysis of HT-29 (human colorectal adenocarcinoma) cells labelling Fibrillarin (green) with purified <a href="mailto:ab166630">ab166630</a> at 1/5000. Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. <a href="mailto:ab150077">ab150077</a>, Alexa Fluor<sup>®</sup> 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as a nuclear counterstain.

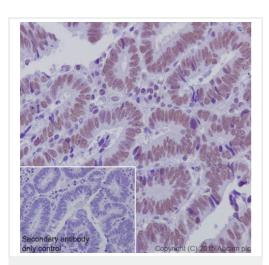
Secondary Only Control: PBS was used instead of the primary antibody as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Fibrillarin antibody

[EPR10823(B)] - Nucleolar Marker

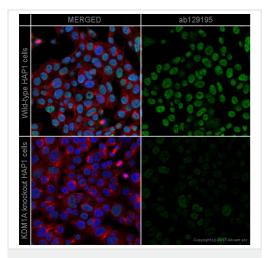
<u>ab166630</u> showing +ve staining in Human gastric adenocarcinoma.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-KDM1 / LSD1 antibody

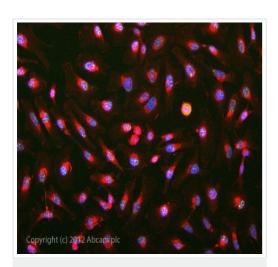
[EPR6825] - Nuclear Marker

Immunohistochemical staining of paraffin embedded human stomach carcinoma with purified <u>ab129195</u> at a working dilution of 1/50. The secondary antibody used is <u>ab97051</u>, a goat anti-rabbit IgG (H&L) at a dilution of 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



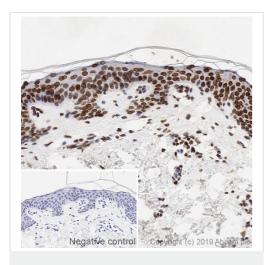
Immunocytochemistry/ Immunofluorescence - Anti-KDM1 / LSD1 antibody [EPR6825] - Nuclear Marker

<u>ab129195</u> staining KDM1A/LSD1 in wild-type HAP1 cells (top panel) and KDM1A knockout HAP1 cells (bottom panel). The cells were fixed with 4% formaldehyde (10min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with <u>ab129195</u> at 1μg/ml concentration and <u>ab195889</u> at 1/250 dilution (shown in pseudo colour red) overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to Rabbit lgG (Alexa Fluor® 488) (<u>ab150081</u>) at 2 μg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.



Immunocytochemistry/ Immunofluorescence - Anti-SC35 antibody [SC-35] - Nuclear Speckle Marker

ICC/IF image of <u>ab11826</u> stained HeLa (Human epithelial cell line from cervix adenocarcinoma) cells. The cells were fixed in 100% methanol (5 min) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody <u>ab11826</u> at 1  $\mu$ g/ml overnight at +4°C. The secondary antibody (green) was DyLight<sup>®</sup> 488 goat anti- mouse (<u>ab96879</u>)  $\mu$ gG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor<sup>®</sup> 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43  $\mu$ M.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Lamin A + Lamin C antibody [4C11]

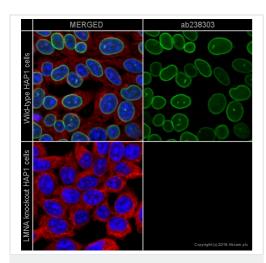
IHC image of Lamin A + C staining in a section of formalin-fixed paraffin-embedded normal human skin\* performed on a Leica BOND<sup>TM</sup> system using the standard protocol F.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6, epitope retrieval solution 1) for 20 mins. The section was then incubated with <u>ab238303</u>, 0.1 µg/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 hematoxylin and mounted with DPX.

The inset secondary-only 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



Immunocytochemistry/ Immunofluorescence - Anti-Lamin A + Lamin C antibody [4C11]

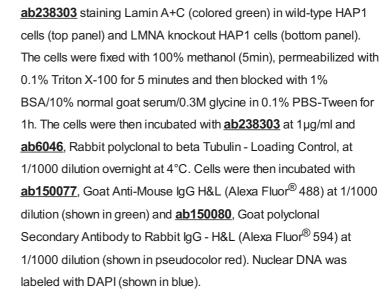
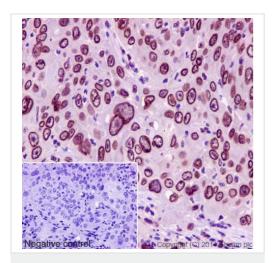


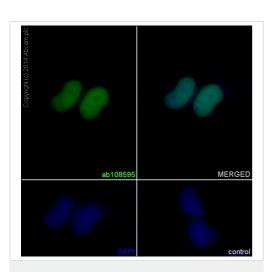
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Lamin A + Lamin C antibody [EPR4100] - Nuclear Envelope Marker

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervix carcinoma tissue labeling Lamin A + C with purified <u>ab108595</u> at 1/250. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit lgG was used as the secondary antibody. Counterstained with hematoxylin.

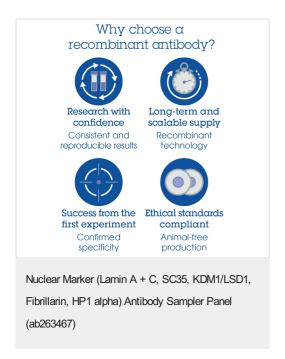
Negative control using PBS instead of primary antibody (inset).



Immunocytochemistry/ Immunofluorescence - Anti-Lamin A + Lamin C antibody [EPR4100] - Nuclear Envelope Marker

Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Lamin A + C (green) with purified <u>ab108595</u> at 1/500. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. <u>ab150077</u>, an Alexa Fluor<sup>®</sup> 488-conjugated goat anti-rabbit lgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

Control: Primary antibody (1/500) and secondary antibody **ab150120**, an Alexa Fluor<sup>®</sup> 594-conjugated goat anti-mouse IgG (1/500).



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