Product name: Anti-KDM4B / JMJD2B antibody [EPR18603] ab191434

Description: Rabbit monoclonal [EPR18603] to KDM4B / JMJD2B

Host species: Rabbit

Tested applications: Suitable for: WB, IHC-P, ICC/IF, Flow Cyt

Species reactivity: Reacts with: Mouse, Rat, Human

Immunogen: Synthetic peptide within Human KDM4B/ JMJD2B aa 100-200. The exact sequence is proprietary.

Database link: O94953


General notes: Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents

This product is a recombinant rabbit monoclonal antibody.

Properties

Form: Liquid


Storage buffer: Preservative: 0.01% Sodium azide
Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

Purity: Protein A purified

Clonality: Monoclonal

Clone number: EPR18603

Isotype: IgG
Function
Histone demethylase that specifically demethylates 'Lys-9' of histone H3, thereby playing a role in histone code. Does not demethylate histone H3 'Lys-4', H3 'Lys-27', H3 'Lys-36' nor H4 'Lys-20'. Only able to demethylate trimethylated H3 'Lys-9', with a weaker activity than KDM4A, KDM4C and KDM4D. Demethylation of Lys residue generates formaldehyde and succinate.

Sequence similarities
Belongs to the JHDM3 histone demethylase family.
Contains 1 JmjC domain.
Contains 1 JmjN domain.
Contains 2 PHD-type zinc fingers.
Contains 2 Tudor domains.

Domain
The 2 Tudor domains recognize and bind methylated histones. Double Tudor domain has an interdigitated structure and the unusual fold is required for its ability to bind methylated histone tails.

Cellular localization
Nucleus.

Images

Our Abpromise guarantee covers the use of ab191434 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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Target

Abreviews Notes

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Cellular localization
Nucleus.

Images

All lanes : Anti-KDM4B / JMJD2B antibody [EPR18603] (ab191434) at 1/2000 dilution

Lane 1 : C6 (Rat glial tumor cells) whole cell lysate
Lane 2 : RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate
Lane 3 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate
Lane 4 : NIH/3T3 (Mouse embryonic fibroblast cells) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 122 kDa  
**Observed band size:** 150 kDa  
_why is the actual band size different from the predicted?_

**Exposure time:** 5 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes: Anti-KDM4B / JMJD2B antibody [EPR18603] (ab191434) at 1/5000 dilution

**Lane 1:** T-47D (Human ductal breast epithelial tumor cell line) whole cell lysate  
**Lane 2:** NIH/3T3 (Mouse embryonic fibroblast cells) whole cell lysate  
**Lane 3:** SW480 (Human colorectal adenocarcinoma cell line) whole cell lysate  
**Lane 4:** HEK-293 (Human epithelial cells from embryonic kidney) whole cell lysate  
**Lane 5:** LNCaP (Human prostate cancer cell line) whole cell lysate  
**Lane 6:** HCT 116 (Human colorectal carcinoma cell line) whole cell lysate  
**Lane 7:** LLC (Mouse lung carcinoma) whole cell lysate  
**Lane 8:** Mouse testis lysate  
**Lane 9:** Rat testis lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 122 kDa  
**Observed band size:** 150 kDa  
_why is the actual band size different from the predicted?_

**Exposure time:** 15 seconds
Blocking/Dilution buffer: 5% NFDM/TBST.

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized T-47D (Human ductal breast epithelial tumor cell line) cells labeling KDM4B / JMJD2B with ab191434 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on T-47D cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab191434 at 1/1000 dilution followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

Flow Cytometry analysis of NIH/3T3 (mouse embryo) labelling KDM4B/JMJD2B with purified ab191434 at 1/1000 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Alexa Fluor®488 goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.
Immunohistochemical analysis of paraffin-embedded human colon tissue labeling KDM4B / JMJD2B with ab191434 at 1/125 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on human colon is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Immunohistochemical analysis of paraffin-embedded mouse stomach tissue labeling KDM4B / JMJD2B with ab191434 at 1/125 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on mouse stomach is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling KDM4B/JMJD2B with ab191434 at 1/125 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nuclear staining on rat kidney is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cells) cells labeling KDM4B/JMJD2B with ab191434 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on NIH/3T3 cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab191434 at 1/1000 dilution followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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