

Product datasheet

Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal ab191080

KO VALIDATED Recombinant RabMAB

★ ★ ★ ★ ★ [1 Abreviews](#) [38 References](#) [7 Images](#)

Overview

Product name	Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal
Description	Rabbit monoclonal [EPR9307(2)] to KMT6 / EZH2 - N-terminal
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), WB, ICC/IF, IHC-P Unsuitable for: ChIP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Human breast carcinoma tissue; HeLa cells. WB: HEK293 cell lysate, Ms testis tissue lysate, mouse and rat spleen tissue lysate
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none">- 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 .

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), 59% PBS
Purity	Protein A purified
Clonality	Monoclonal

Clone number EPR9307(2)
Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab191080 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
Flow Cyt (Intra)		1/90. Purified format. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/500. Detects a band of approximately 93 kDa (predicted molecular weight: 85 kDa).
ICC/IF	★ ★ ☆ ☆ ☆ (1)	1/250.
IHC-P		1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for ChIP.

Target

Function Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex, which methylates 'Lys-9' and 'Lys-27' of histone H3, leading to transcriptional repression of the affected target gene. Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively. Compared to EZH2-containing complexes, it is more abundant in embryonic stem cells and plays a major role in forming H3K27me3, which is required for embryonic stem cell identity and proper differentiation. The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems. Genes repressed by the PRC2/EED-EZH2 complex include HOXC8, HOXA9, MYT1, CDKN2A and retinoic acid target genes.

Tissue specificity Expressed in many tissues. Overexpressed in numerous tumor types including carcinomas of the breast, colon, larynx, lymphoma and testis.

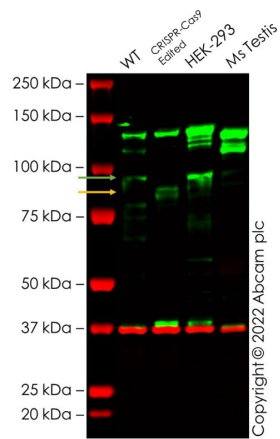
Sequence similarities Belongs to the histone-lysine methyltransferase family. EZ subfamily.
Contains 1 SET domain.

Developmental stage Expression decreases during senescence of embryonic fibroblasts (HEFs). Expression peaks at the G1/S phase boundary.

Post-translational modifications Phosphorylated by AKT1. Phosphorylation by AKT1 reduces methyltransferase activity.

Cellular localization Nucleus.

Images



Western blot - Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal (ab191080)

All lanes : Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal (ab191080) at 1/500 dilution

Lane 1 : Wild-type MCF7 cell lysate

Lane 2 : ezh2 CRISPR-Cas9 edited MCF7 cell lysate

Lane 3 : HEK-293 cell lysate

Lane 4 : Mouse Testis cell lysate

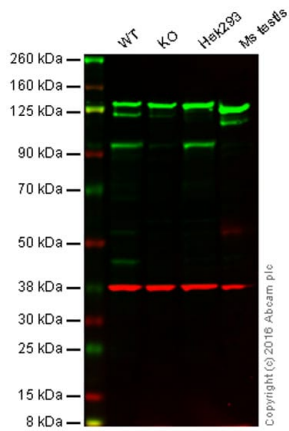
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 85 kDa

Observed band size: 90 kDa

False colour image of Western blot: Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal staining at 1/500 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] ([ab8245](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab191080 was shown to bind specifically to KMT6 / EZH2. A band was observed at 90 kDa (green arrow) in wild-type MCF7 cell lysates with no signal observed at this size in ezh2 CRISPR-Cas9 edited cell line [ab281611](#) (CRISPR-Cas9 edited cell lysate [ab282963](#)). The band observed in the CRISPR-Cas9 edited lysate lane below 90 kDa (yellow arrow) is likely to represent a truncated form of KMT6 / EZH2. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and ezh2 CRISPR-Cas9 edited MCF7 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-KMT6 / EZH2 antibody
[EPR9307(2)] - N-terminal (ab191080)

Lane 1: Wild-type HAP1 cell lysate (20 µg)

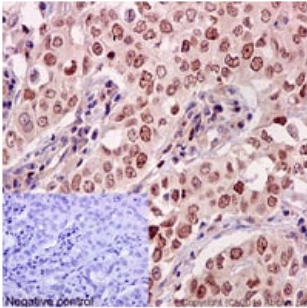
Lane 2: KMT6 / EZH2 knockout HAP1 cell lysate (20 µg)

Lane 3: HEK293 cell lysate (20 µg)

Lane 4: Ms testis tissue lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab191080 observed at 93 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

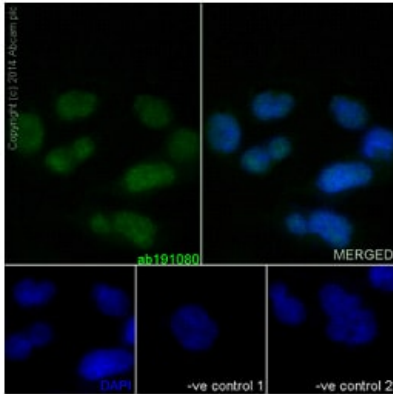
ab191080 was shown to recognize KMT6 / EZH2 when KMT6 / EZH2 knockout samples were used, along with additional cross-reactive bands. Wild-type and KMT6 / EZH2 knockout samples were subjected to SDS-PAGE. ab191080 and **ab8245** (loading control to GAPDH) were diluted at 1/500 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KMT6 / EZH2 antibody
[EPR9307(2)] - N-terminal (ab191080)

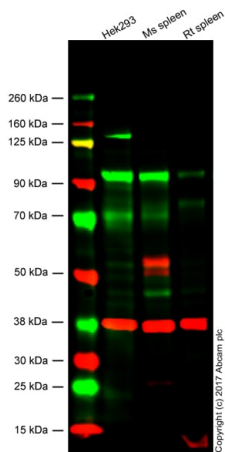
Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling KMT6 / EZH2 with ab191080 at 1/250 dilution followed by pre-diluted HRP Polymer for Rabbit IgG secondary antibody and counter-stained with Hematoxylin (inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal (ab191080)

Immunofluorescent analysis of HeLa cells (4% Paraformaldehyde-fixed; 0.1% tritonX-100-permeabilized) labeling KMT6 / EZH2 with ab191080 at 1/250 dilution followed by Goat anti rabbit IgG (AlexaFluor® 488) secondary at 1/200 dilution and counter-stained with DAPI (blue).



Western blot - Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal (ab191080)

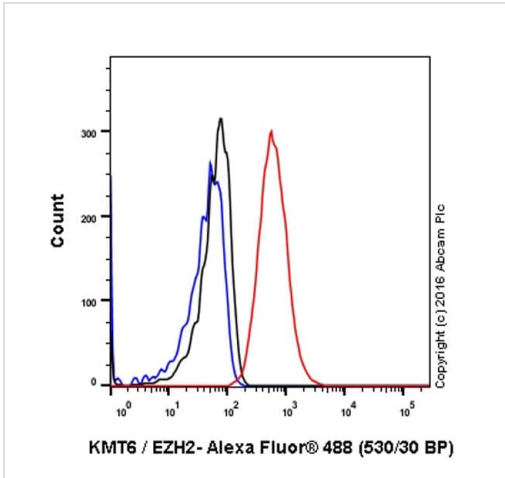
Lane 1: HEK293 cell lysate (20 µg)

Lane 2: Mouse spleen tissue lysate (20 µg)

Lane 3: Rat spleen tissue lysate (20 µg)

Lanes 1 - 3: Merged signal (red and green). Green - ab191080 observed at 93 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

Human, mouse and rat extracts were subjected to SDS-PAGE. ab191080 and **ab8245** (loading control to GAPDH) were diluted at 1/500 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.







ab191080 staining KMT6 / EZH2 in the human cell line Jurkat (human acute T cell leukemia) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/90. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.

Isotype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)

Flow Cytometry (Intracellular) - Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal (ab191080)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-KMT6 / EZH2 antibody [EPR9307(2)] - N-terminal (ab191080)

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