

Product datasheet

Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade ab133482

KO **VALIDATED** Recombinant **RabMAB**

★★★★☆ [1 Abreviews](#) [9 References](#) [7 Images](#)

Overview

Product name	Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade
Description	Rabbit monoclonal [EPR4019(2)] to EHMT2/G9A - ChIP Grade
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ChIP-sequencing Unsuitable for: Flow Cyt, ICC/IF or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human EHMT2/G9A aa 1150 to the C-terminus (C terminal). The exact sequence is proprietary. Database link: Q96KQ7
Positive control	WB: HeLa, NCCIT, HepG2, and 293T cell lysates. IHC-P: Human gastric adenocarcinoma and lung squamous tissue. ChIP-seq: HeLa cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <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 <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide

Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant

Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4019(2)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab133482 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)	1/1000 - 1/10000. Predicted molecular weight: 132 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ChIP-sequencing		Use 8µg for 10 ⁷ cells.

Application notes Is unsuitable for Flow Cyt, ICC/IF or IP.

Target

Function Histone methyltransferase that specifically mono- and dimethylates 'Lys-9' of histone H3 (H3K9me1 and H3K9me2, respectively) in euchromatin. H3K9me represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. Also mediates monomethylation of 'Lys-56' of histone H3 (H3K56me1) in G1 phase, leading to promote interaction between histone H3 and PCNA and regulating DNA replication. Also weakly methylates 'Lys-27' of histone H3 (H3K27me). Also required for DNA methylation, the histone methyltransferase activity is not required for DNA methylation, suggesting that these 2 activities function independently. Probably targeted to histone H3 by different DNA-binding proteins like E2F6, MGA, MAX and/or DP1. May also methylate histone H1. In addition to the histone methyltransferase activity, also methylates non-histone proteins: mediates dimethylation of 'Lys-373' of p53/TP53. Also methylates CDYL, WIZ, ACIN1, DNMT1, HDAC1, ERCC6, KLF12 and itself.

Tissue specificity Expressed in all tissues examined, with high levels in fetal liver, thymus, lymph node, spleen and peripheral blood leukocytes and lower level in bone marrow.

Sequence similarities Belongs to the class V-like SAM-binding methyltransferase superfamily. Histone-lysine methyltransferase family. Suvar3-9 subfamily.
Contains 7 ANK repeats.
Contains 1 post-SET domain.
Contains 1 pre-SET domain.
Contains 1 SET domain.

Domain The SET domain mediates interaction with WIZ.
The ANK repeats bind H3K9me1 and H3K9me2.

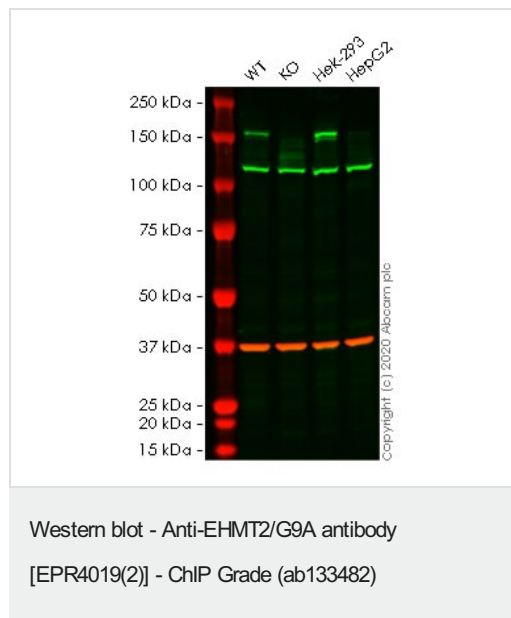
Post-translational modifications

Methylated at Lys-185; automethylated.

Cellular localization

Nucleus. Chromosome. Associates with euchromatic regions. Does not associate with heterochromatin.

Images



All lanes : Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate

Lane 2 : EHMT2/G9A knockout HeLa cell lysate

Lane 3 : HEK-293 cell lysate

Lane 4 : HepG2 cell lysate

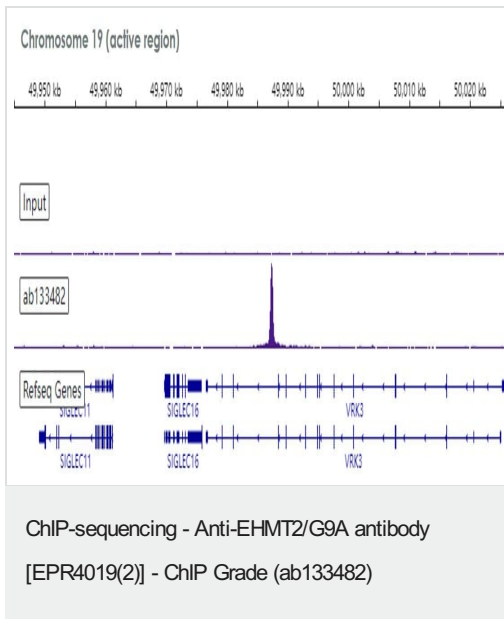
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 132 kDa

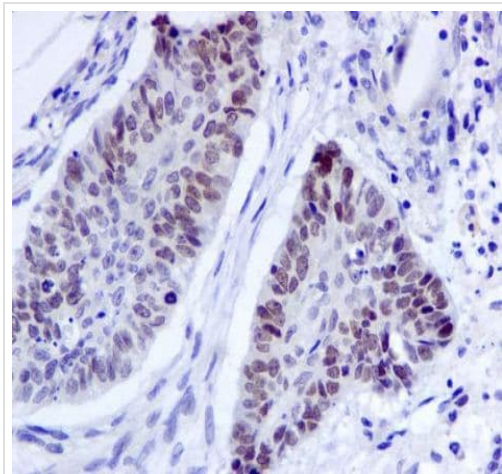
Lanes 1-4: Merged signal (red and green). Green - ab133482 observed at 160 kDa. Red - loading control **ab8245** observed at 37 kDa.

ab133482 Anti-EHMT2/G9A antibody [EPR4019(2)] was shown to specifically react with EHMT2/G9A in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265149** (knockout cell lysate **ab257080**) was used. Wild-type and EHMT2/G9A knockout samples were subjected to SDS-PAGE. ab133482 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. 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 in 20000 dilution for 1 hour at room temperature before imaging.



Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 HeLa cells and 8 μ g of ab133482 [EPR4019(2)]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads.

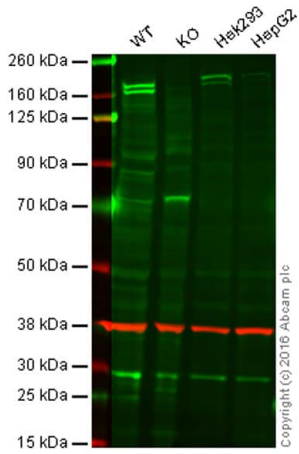
Additional screenshots of mapped reads can be downloaded [here](#).



Immunohistochemical analysis of paraffin-embedded lung squamous carcinoma tissue labelled with ab133482 at 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EHMT2/G9A antibody
[EPR4019(2)] - ChIP Grade (ab133482)



Western blot - Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482)

All lanes : Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482) at 1/1000 dilution

Lane 1 : Wild-type HAP1 cell lysate

Lane 2 : EHMT2/G9A knockout HAP1 cell lysate

Lane 3 : HEK293 cell lysate

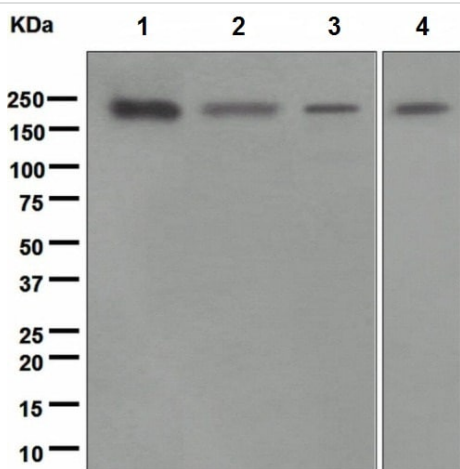
Lane 4 : HepG2 cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 132 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab133482 observed at 170 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab133482 was shown to recognize EHMT2/G9A when EHMT2/G9A knockout samples were used, along with additional cross-reactive bands. Wild-type and EHMT2/G9A knockout samples were subjected to SDS-PAGE. ab133482 and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/10000 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 1/10000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482)

All lanes : Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482) at 1/1000 dilution

Lane 1 : HeLa cell lysate

Lane 2 : NCCIT cell lysate

Lane 3 : HepG2 cell lysate

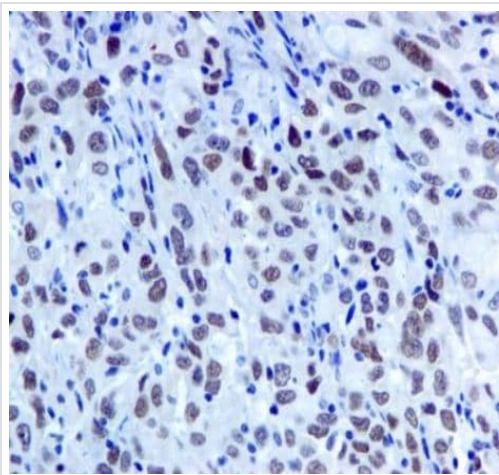
Lane 4 : 293T cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP labelled goat-anti-rabbit at 1/2000 dilution

Predicted band size: 132 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482)

Immunohistochemical analysis of paraffin-embedded gastric adenocarcinoma tissue labelled with ab133482 at 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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-EHMT2/G9A antibody [EPR4019(2)] - ChIP Grade (ab133482)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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