abcam

Product datasheet

Anti-EHMT2/G9A antibody ab229455

1 Abreviews 7 Images

Overview

Product name	Anti-EHMT2/G9A antibody
Description	Rabbit polyclonal to EHMT2/G9A
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, IHC-P, ChIP, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Cow
Immunogen	Recombinant fragment within Human EHMT2/G9A (internal sequence). The exact sequence is proprietary. Database link: **Q96KQ7**
Positive control	WB: A431, HeLa, HepG2 and HEK-293T whole cell lysates; HEK-293T, Neuro-2a, C8D30, NIH/3T3, RAW 264.7 and C2C12 whole cell extracts. IP: HeLa whole cell lysate (**ab150035**). IHC-P: Human lung carcinoma tissue. ICC/IF: HeLa cells. ChIP: HeLa chromatin extract.
General notes	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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab229455 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 - 1/3000. Predicted molecular weight: 132 kDa.
IP		1/100 - 1/500.
IHC-P		1/100 - 1/1000.
ChIP		Use at an assay dependent concentration.
ICC/IF		1/100 - 1/1000.

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.

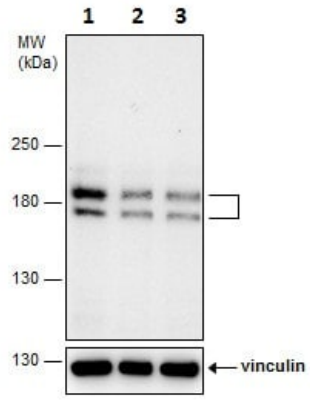
Sequence similarities Belongs to the class V-like SAM-binding methyltransferase superfamily. Histone-lysine methyltransferase family. Suvar3-9 subfamily.
Contains 7 ANK repeats.
Contains 1 post-SET domain.
Contains 1 pre-SET domain.
Contains 1 SET domain.

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



Western blot - Anti-EHMT2/G9A antibody (ab229455)

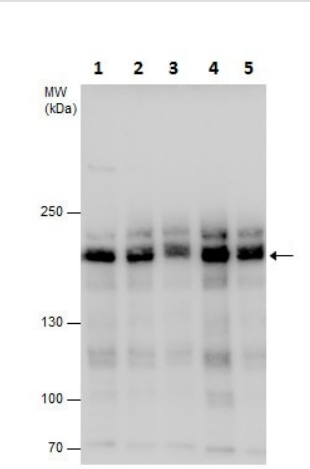
All lanes : Anti-EHMT2/G9A antibody (ab229455) at 1/2000 dilution

Lane 1 : Non-transfected HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract
Lanes 2-3 : EHMT2/G9A shRNA-transfected HEK-293T whole cell extract

Lysates/proteins at 30 µg per lane.

Predicted band size: 132 kDa

5% SDS-PAGE gel.



Western blot - Anti-EHMT2/G9A antibody (ab229455)

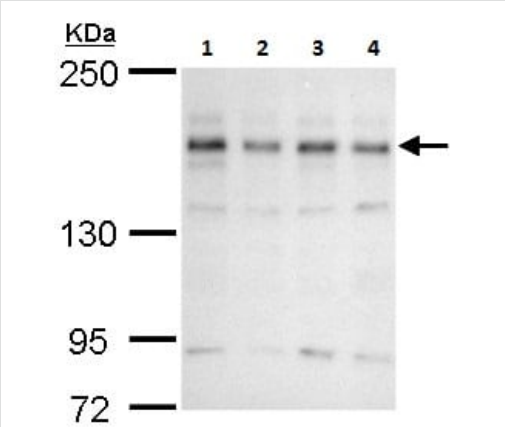
All lanes : Anti-EHMT2/G9A antibody (ab229455) at 1/3000 dilution

Lane 1 : Neuro-2a (mouse neuroblastoma cell line) whole cell extract
Lane 2 : C8D30 whole cell extract
Lane 3 : NIH/3T3 (mouse embryo fibroblast cell line) whole cell extract
Lane 4 : RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell extract
Lane 5 : C2C12 (mouse myoblast cell line) whole cell extract

Lysates/proteins at 30 µg per lane.

Predicted band size: 132 kDa

5% SDS-PAGE gel.



Western blot - Anti-EHMT2/G9A antibody (ab229455)

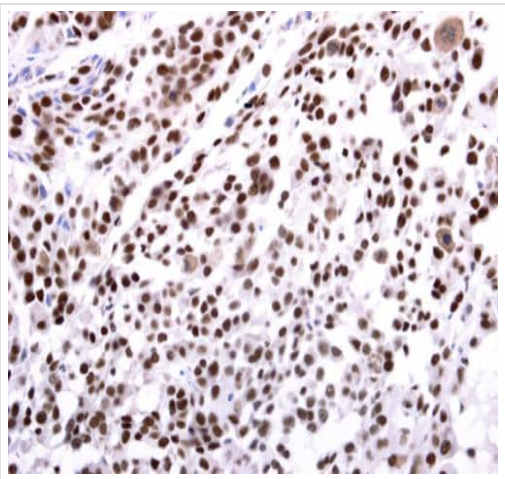
All lanes : Anti-EHMT2/G9A antibody (ab229455) at 1/1000 dilution

Lane 1 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 2 : A431 (human epidermoid carcinoma cell line) whole cell lysate
Lane 3 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate

Lysates/proteins at 30 µg per lane.

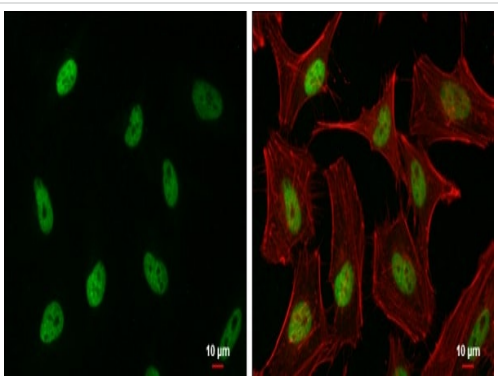
Predicted band size: 132 kDa

5% SDS-PAGE



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EHMT2/G9A antibody (ab229455)

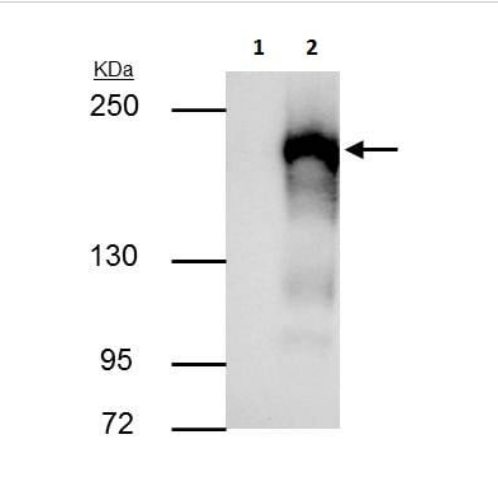
Paraffin-embedded human lung carcinoma tissue stained for EHMT2/G9A with ab229455 at 1/250 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-EHMT2/G9A antibody (ab229455)

4% paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for EHMT2/G9A (green) using ab229455 at 1/1000 dilution in ICC/IF.

Nuclear counterstain: Hoechst 33342 (blue). The cytoskeleton is stained with phalloidin at 1/200 dilution (red).



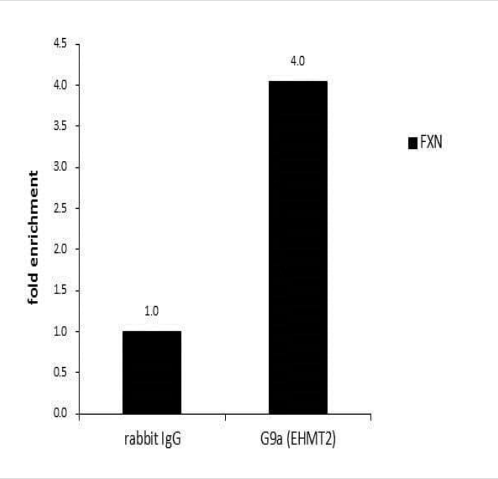
Immunoprecipitation - Anti-EHMT2/G9A antibody (ab229455)

EHMT2/G9A was immunoprecipitated from HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with 3 µg ab229455. Western blot was performed from the immunoprecipitate using ab229455 at 1/1000 dilution. Anti-rabbit IgG (HRP) was used as a secondary reagent.

Lane 1: Control IP in HeLa whole cell lysate with 3 µg of pre-immune rabbit IgG.

Lane 2: ab229455 IP in HeLa whole cell lysate.

5% SDS-PAGE gel.



ChIP - Anti-EHMT2/G9A antibody (ab229455)

ChIP was performed with HeLa chromatin extract and 5 µg of either normal rabbit IgG or ab229455. The precipitated DNA was detected by PCR with primer set targeting to FXN.

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