abcam

Product datasheet

# Anti-EHMT2/G9A antibody ab40542

8 Abreviews 45 References 2 Images

## Overview

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|---|---|
| **Product name** | Anti-EHMT2/G9A antibody |
| **Description** | Rabbit polyclonal to EHMT2/G9A |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** IHC-P, WB |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Fusion protein corresponding to Human EHMT2/ G9A aa 831-1001.<br>Database link: **Q96KQ7** |
| **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.<br>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

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|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| **Purity** | Whole antiserum |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |

## Applications

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|---|---|
| **The Abpromise guarantee** | Our **Abpromise guarantee** covers the use of ab40542 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 |
|---|---|---|
| **IHC-P** | ★★★★☆ (1) | 1/2000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. |
| **WB** | ★★☆☆☆ (5) | 1/2000 - 1/2500. Predicted molecular weight: 132 kDa. For endogeneous detection (without G9a over expression): use nuclear extracts and block overnight or perform IP prior to WB. |

## Target

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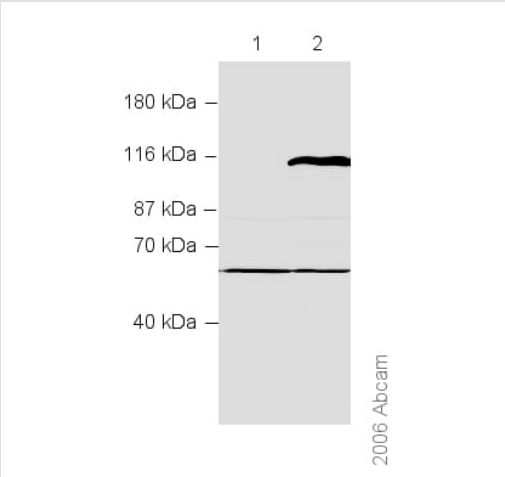
|---|---|
| **Function** | Histone methyltransferase that specifically mono- and dimethylates 'Lys-9' of histone H3 (H3K9me1 and H3K9me2, respectively) in euchromatin. H3K9me represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. Also mediates 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.<br>Contains 7 ANK repeats.<br>Contains 1 post-SET domain.<br>Contains 1 pre-SET domain.<br>Contains 1 SET domain. |
| **Domain** | The SET domain mediates interaction with WIZ.<br>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

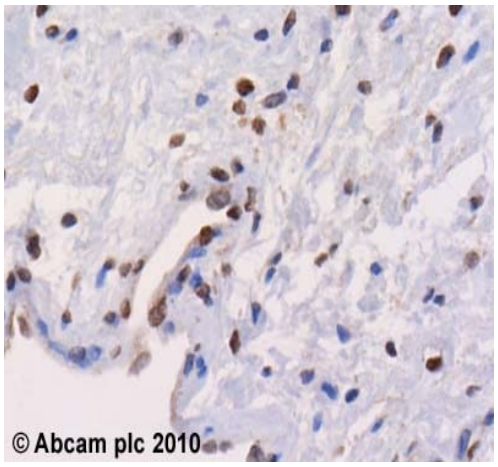



Western blot - Anti-EHMT2/G9A antibody (ab40542)

**All lanes :** Anti-EHMT2/G9A antibody (ab40542) at 1/2500 dilution

**Lane 1 :** Untransfected HeLa cell extract
**Lane 2 :** G9a transfected HeLa cell extract

**Predicted band size:** 132 kDa
**Observed band size:** 132 kDa
**Additional bands at:** 60 kDa. We are unsure as to the identity of these extra bands.




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EHMT2/G9A antibody (ab40542)

ab40542 (1:2000) staining EHMT2/ G9A in human prostate using an automated system (DAKO Autostainer Plus). Using this protocol there is strong nuclear staining.
Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer citrate pH6.1 in a DAKO PT link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



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