

## Product datasheet

### Anti-KDM1/LSD1 antibody - CHIP Grade ab195405

[4 Images](#)

#### Overview

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|                            |   |
|----------------------------|---|
| <b>Product name</b>        | Anti-KDM1/LSD1 antibody - CHIP Grade  |
| <b>Description</b>         | Rabbit polyclonal to KDM1/LSD1 - CHIP Grade   |
| <b>Host species</b>        | Rabbit  |
| <b>Tested applications</b> | <b>Suitable for:</b> WB, CHIP, ICC/IF, CHIP-sequencing  |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Human   |
| <b>Immunogen</b>           | Synthetic peptide within Human KDM1/ LSD1 aa 1-100 (internal sequence) conjugated to keyhole limpet haemocyanin. The exact sequence is proprietary.<br>Database link: <a href="#">O60341</a>  |
| <b>Positive control</b>    | Chromatin prepared from K562 cells; HeLa nuclear extract; HeLa cells.   |
| <b>General notes</b>       | <p>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.</p> <p>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&amp;As</p> |

#### Properties

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|                             |   |
|-----------------------------|---|
| <b>Form</b>                 | Liquid  |
| <b>Storage instructions</b> | 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. |
| <b>Storage buffer</b>       | Preservatives: 0.05% Sodium azide, 0.05% Proclin 300<br>Constituent: 99% PBS  |
| <b>Purity</b>               | Protein A purified  |
| <b>Clonality</b>            | Polyclonal  |
| <b>Isotype</b>              | IgG   |

#### Applications

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**The Abpromise guarantee**

Our **Abpromise guarantee** covers the use of ab195405 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              |           | 1/4000. Predicted molecular weight: 92 kDa.  |
| ChIP            |           | Use at an assay dependent concentration.<br>Use 1 µg/ChIP for chromatin prepared from $4 \times 10^6$ cells. |
| ICC/IF          |           | 1/200.   |
| ChIP-sequencing |           | Use at an assay dependent concentration.<br>Use 1 µg/ChIP for chromatin prepared from $4 \times 10^6$ cells. |

**Target****Function**

Histone demethylase that demethylates both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context. Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2) H3K4me. May play a role in the repression of neuronal genes. Alone, it is unable to demethylate H3K4me on nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity. Also acts as a coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in ANDR-containing complexes, which mediates phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag that prevents demethylation H3K4me, prevents H3K4me demethylase activity of KDM1A. Demethylates di-methylated 'Lys-370' of p53/TP53 which prevents interaction of p53/TP53 with TP53BP1 and represses p53/TP53-mediated transcriptional activation. Demethylates and stabilizes the DNA methylase DNMT1. Required for gastrulation during embryogenesis.

**Tissue specificity**

Ubiquitously expressed.

**Sequence similarities**

Belongs to the flavin monoamine oxidase family.  
Contains 1 SWIRM domain.

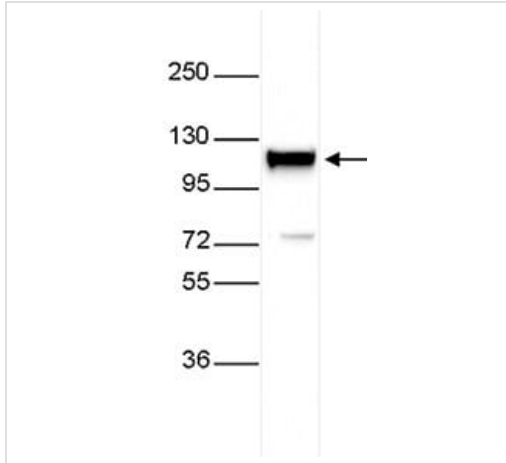
**Domain**

The SWIRM domain may act as an anchor site for a histone tail.

**Cellular localization**

Nucleus.

**Images**

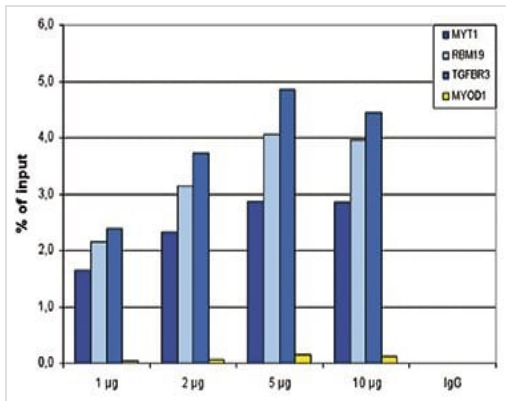


Western blot - Anti-KDM1/LSD1 antibody - ChIP Grade (ab195405)

Anti-KDM1/LSD1 antibody - ChIP Grade (ab195405) at 1/4000 dilution + HeLa nuclear extract at 40 µg

**Predicted band size:** 92 kDa

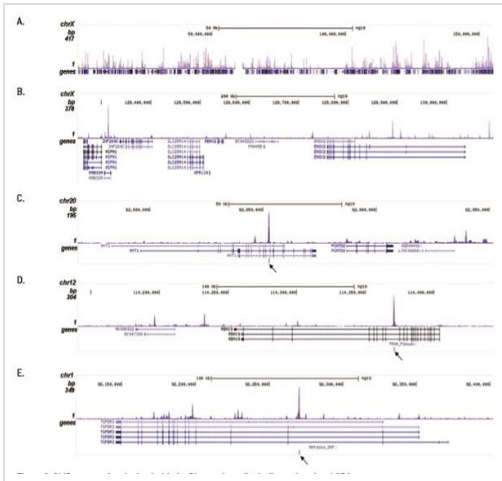
The antibody was diluted in TBS-Tween containing 5% skimmed milk.



ChIP - Anti-KDM1/LSD1 antibody - ChIP Grade (ab195405)

ChIP results obtained with ab195405 directed against KDM1 / LSD1.

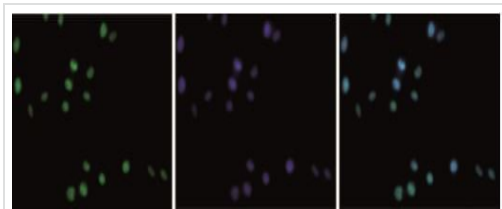
ChIP was performed with ab195405 on sheared chromatin from 4,000,000 K562 cells. An antibody titration consisting of 1, 2, 5 and 10 µg per ChIP experiment was analysed. IgG (2 µg/IP) was used as negative IP control. QPCR was performed with primers for specific regions in the MYT1, RBM19, and TGFBR3 genes, used as positive controls, and for the MYOD1 gene, used as negative control. The figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



ChIP-sequencing - Anti-KDM1/LSD1 antibody - ChIP Grade (ab195405)

ChIPseq results obtained with ab195405 directed against KDM1 / LSD1.

ChIP was performed on sheared chromatin from 4,000,000 K562 cells using 1 µg of ab195405. The IP'd DNA was subsequently analysed on an Illumina HiSeq. Library preparation, cluster generation and sequencing were performed according to the manufacturer's instructions. The 50 bp tags were aligned to the human genome using the BWA algorithm. The figure shows the peak distribution along the complete sequence and a 600 kb region of the X-chromosome (figure A and B) and in three regions surrounding the MYT1, RBM19 and TGFBR3 positive control genes, respectively (figure C, D and E). The position of the amplicon used for ChIP-qPCR is indicated by an arrow.



Immunocytochemistry/ Immunofluorescence - Anti-KDM1/LSD1 antibody - ChIP Grade (ab195405)

Immunofluorescent analysis of HeLa cells labeling KDM1 / LSD1 with ab195405 at 1/200 dilution.

Cells were fixed with 4% formaldehyde for 10 minutes and blocked with PBS/TX-100 containing 5% normal goat serum and 1% BSA. The cells were immunofluorescently labelled with ab195405 (left) diluted in blocking solution followed by an anti-rabbit antibody conjugated to Alexa488. The middle panel shows staining of the nuclei with DAPI. A merge of the two stainings is shown on the right.

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

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