

## KDM1A / LSD1 Antibody (Internal)

Rabbit Polyclonal Antibody Catalog # ALS12973

### **Specification**

## KDM1A / LSD1 Antibody (Internal) - Product Information

Application IF, WB Primary Accession 060341

Reactivity Human, Mouse, Rat

Host Rabbit
Clonality Polyclonal
Calculated MW 93kDa KDa

### KDM1A / LSD1 Antibody (Internal) - Additional Information

#### **Gene ID 23028**

#### **Other Names**

Lysine-specific histone demethylase 1A, 1.-.-., BRAF35-HDAC complex protein BHC110, Flavin-containing amine oxidase domain-containing protein 2, KDM1A, AOF2, KDM1, KIAA0601, LSD1

# **Target/Specificity**

16 amino acid peptide from near the center of human LSD1

### **Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

### **Precautions**

KDM1A / LSD1 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

#### KDM1A / LSD1 Antibody (Internal) - Protein Information

### Name KDM1A (HGNC:29079)

## **Function**

Histone demethylase that can demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context (PubMed:<a href="http://www.uniprot.org/citations/15620353" target="\_blank">15620353</a>, PubMed:<a href="http://www.uniprot.org/citations/15811342" target="\_blank">15811342</a>, PubMed:<a href="http://www.uniprot.org/citations/16140033" target="\_blank">16140033</a>, PubMed:<a href="http://www.uniprot.org/citations/16079794" target="\_blank">16079794</a>, PubMed:<a href="http://www.uniprot.org/citations/16079795" target="\_blank">16079795</a>, PubMed:<a href="http://www.uniprot.org/citations/16223729" target="\_blank">16223729</a>). Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed (PubMed:<a href="http://www.uniprot.org/citations/15620353" target=" blank">15620353</a>, PubMed:<a href="http://www.uniprot.org/citations/15811342"



target=" blank">15811342</a>, PubMed:<a href="http://www.uniprot.org/citations/16079794" target="blank">16079794</a>, PubMed:<a href="http://www.uniprot.org/citations/21300290" target="blank">21300290</a>). 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 (PubMed: <a href="http://www.uniprot.org/citations/15620353" target=" blank">15620353</a>, PubMed:<a href="http://www.uniprot.org/citations/20389281" target=" blank">20389281</a>, PubMed:<a href="http://www.uniprot.org/citations/21300290" target="blank">21300290</a>, PubMed:<a href="http://www.uniprot.org/citations/23721412" target="blank">23721412</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/16140033" target=" blank">16140033</a>, PubMed:<a href="http://www.uniprot.org/citations/16079794" target="blank">16079794</a>, PubMed:<a href="http://www.uniprot.org/citations/16885027" target=" blank">16885027</a>, PubMed:<a href="http://www.uniprot.org/citations/21300290" target="blank">21300290</a>, PubMed:<a href="http://www.uniprot.org/citations/23721412" target="blank">23721412</a>). Also acts as a coactivator of androgen receptor (AR)-dependent transcription, by being recruited to AR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in AR-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 (PubMed: <a href="http://www.uniprot.org/citations/16079795" target="blank">16079795</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/29691401" target=" blank">29691401</a>). Demethylates methylated 'Lys-42' and methylated 'Lys-117' of SOX2 (PubMed:<a href="http://www.uniprot.org/citations/29358331" target=" blank">29358331</a>). Required for gastrulation during embryogenesis. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development. Effector of SNAI1-mediated transcription repression of E-cadherin/CDH1, CDN7 and KRT8. Required for the maintenance of the silenced state of the SNAI1 target genes E-cadherin/CDH1 and CDN7 (PubMed:<a href="http://www.uniprot.org/citations/20389281" target=" blank">20389281</a>).

**Cellular Location** Nucleus

**Tissue Location**Ubiquitously expressed.

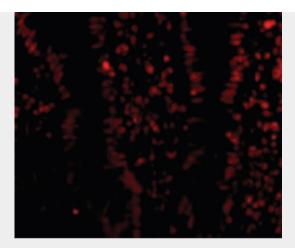
### KDM1A / LSD1 Antibody (Internal) - Protocols

Provided below are standard protocols that you may find useful for product applications.

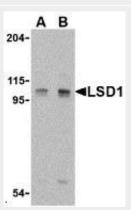
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# KDM1A / LSD1 Antibody (Internal) - Images





Immunofluorescence of LSD1 in Human Small Intestine cells with LSD1 antibody at 20 ug/ml.



Western blot of P815 cell lysate with KDM1A (LSD1) antibody at (A) 1 and (B) 2 ug/ml.

## KDM1A / LSD1 Antibody (Internal) - Background

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# KDM1A / LSD1 Antibody (Internal) - References

Nagase T., et al. DNA Res. 5:31-39(1998).





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Gregory S.G., et al. Nature 441:315-321(2006). Bechtel S., et al. BMC Genomics 8:399-399(2007). Hakimi M.-A., et al. Proc. Natl. Acad. Sci. U.S.A. 99:7420-7425(2002). Humphrey G.W., et al.J. Biol. Chem. 276:6817-6824(2001).