

**KDM1A / LSD1 Antibody (Internal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS12973****Specification****KDM1A / LSD1 Antibody (Internal) - Product Information**

Application	IF, WB
Primary Accession	<a href="#">O60341</a>
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>).

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

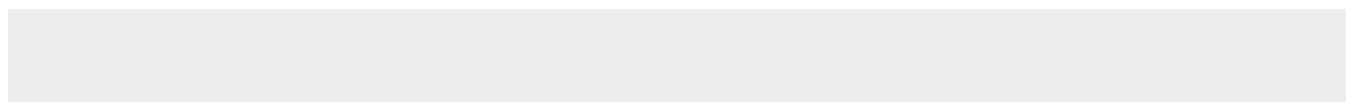
Ubiquitously expressed.

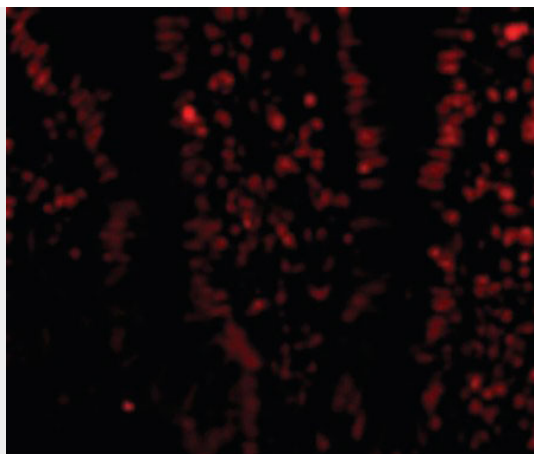
## KDM1A / LSD1 Antibody (Internal) - Protocols

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

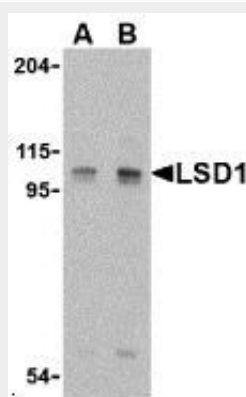
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## 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).

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).