

**KDM1/LSD1 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AP53268**

**Specification**

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**KDM1/LSD1 Antibody - Product Information**

Application	IP, WB, ICC
Primary Accession	<a href="#">O60341</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	110 KDa

**KDM1/LSD1 Antibody - Additional Information**

**Gene ID** 23028

**Other Names**

Amine oxidase (flavin containing) domain 2; AOF2; BHC110; BRAF35 HDAC complex protein BHC110; BRAF35-HDAC complex protein BHC110; FAD binding protein BRAF35 HDAC complex, 110 kDa subunit; Flavin-containing amine oxidase domain-containing protein 2; KDM1; KDM1; Kdm1a; KDM1A\_HUMAN; LSD 1; LSD1; Lysine (K) specific demethylase 1; Lysine (K) specific demethylase 1A; Lysine specific histone demethylase 1; Lysine specific histone demethylase 1A; Lysine-specific histone demethylase 1A.

**Dilution**

IP~~1:500  
WB~~1:1000  
ICC~~1:100

**Format**

Purified mouse monoclonal in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**KDM1/LSD1 Antibody - 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: [15620353](http://www.uniprot.org/citations/15620353), PubMed: [15811342](http://www.uniprot.org/citations/15811342), PubMed: [16079794](http://www.uniprot.org/citations/16079794), PubMed: [16079794](http://www.uniprot.org/citations/16079794)).

<http://www.uniprot.org/citations/16079795> target="\_blank">16079795</a>, PubMed:<a href="http://www.uniprot.org/citations/16140033" target="\_blank">16140033</a>, PubMed:<a href="http://www.uniprot.org/citations/16223729" target="\_blank">16223729</a>, PubMed:<a href="http://www.uniprot.org/citations/27292636" target="\_blank">27292636</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/16079794" target="\_blank">16079794</a>, PubMed:<a href="http://www.uniprot.org/citations/16140033" target="\_blank">16140033</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 (PubMed:<a href="http://www.uniprot.org/citations/16079794" target="\_blank">16079794</a>, PubMed:<a href="http://www.uniprot.org/citations/16140033" target="\_blank">16140033</a>). Facilitates epithelial-to-mesenchymal transition by acting as an effector of SNAI1-mediated transcription repression of epithelial markers E-cadherin/CDH1, CDN7 and KRT8 (PubMed:<a href="http://www.uniprot.org/citations/20562920" target="\_blank">20562920</a>, PubMed:<a href="http://www.uniprot.org/citations/27292636" target="\_blank">27292636</a>). 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. Chromosome. Note=Associates with chromatin

### Tissue Location

Ubiquitously expressed.

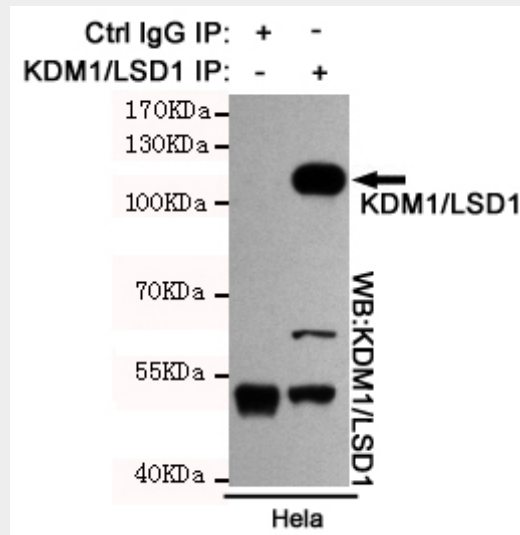
### KDM1/LSD1 Antibody - Protocols

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

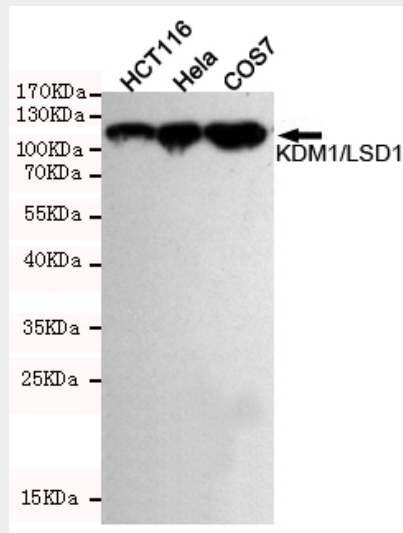
- [Western Blot](#)

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

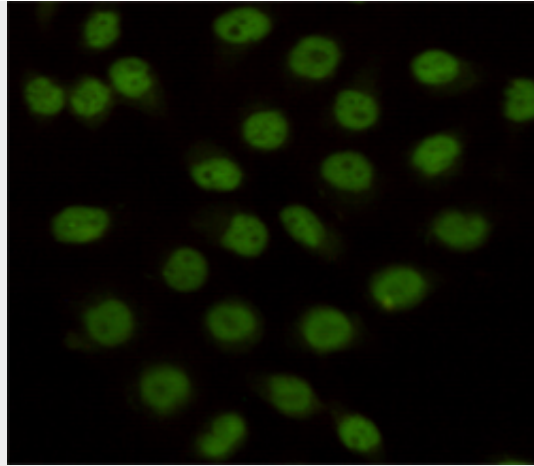
**KDM1/LSD1 Antibody - Images**



Immunoprecipitation analysis of HeLa cell lysates using KDM1/LSD1 mouse mAb.



Western blot detection of KDM1/LSD1 in HeLa, HCT116 and COS7 cell lysates using KDM1/LSD1 mouse mAb (1:1000 diluted). Predicted band size: 110KDa. Observed band size: 110KDa.



Immunocytochemistry staining of HeLa cells fixed with 4% Paraformaldehyde and using anti-KDM1/LSD1 mouse mAb (dilution 1:100).

### **KDM1/LSD1 Antibody - Background**

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### **KDM1/LSD1 Antibody - References**

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