10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Specification

KDM1/LSD1 Antibody - Product Information

Application	**WB, ICC, IP**
Primary Accession	O60341
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;KDM 1;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
WB~~1:1000
ICC~~1:100
IP~~1:500

Format
Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Storage
Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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, PubMed:15811342, PubMed:16079794, PubMed:16079795, PubMed:<a

href="http://www.uniprot.org/citations/16140033" target="_blank">16140033, PubMed:16223729, PubMed:27292636). Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed (PubMed:15620353, PubMed:15811342, PubMed:16079794, PubMed:21300290). 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:15620353, PubMed:20389281, PubMed:21300290, PubMed:23721412). 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:16079794, PubMed:16140033, PubMed:16885027, PubMed:21300290, PubMed:23721412). 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:16079795). 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:29691401). Demethylates methylated 'Lys-42' and methylated 'Lys-117' of SOX2 (PubMed:29358331). 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:16079794, PubMed:16140033). 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:20562920, PubMed:27292636). Required for the maintenance of the silenced state of the SNAI1 target genes E-cadherin/CDH1 and CDN7 (PubMed:20389281). Required for the repression of GIPR expression (PubMed:34655521, PubMed:34906447).

Cellular Location
Nucleus. Chromosome. Note=Associates with chromatin

Tissue Location
Ubiquitously expressed.

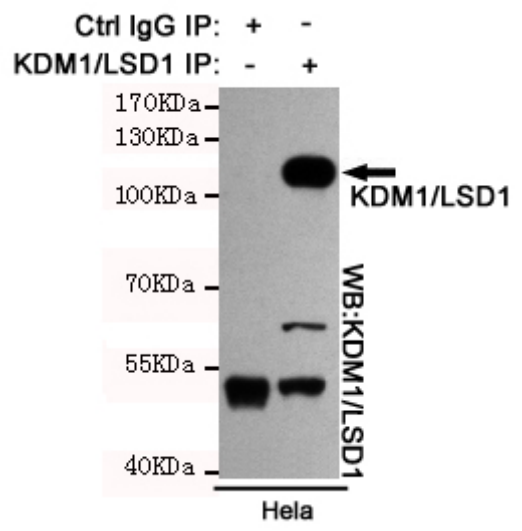
KDM1/LSD1 Antibody - Protocols

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

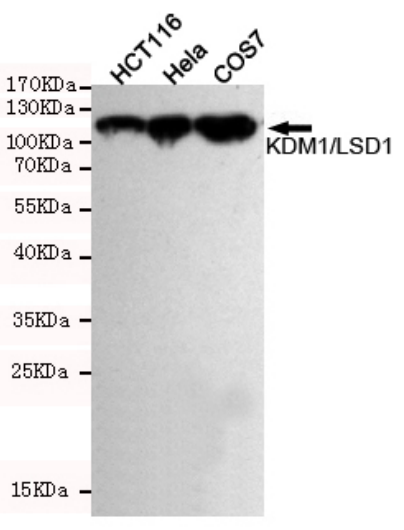
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KDM1/LSD1 Antibody - Images

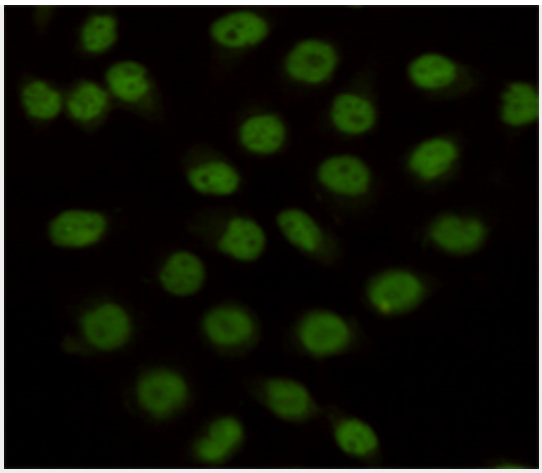


Immunoprecipitation analysis of Hela cell lysates using KDM1/LSD1 mouse mAb.



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.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



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

KDM1/LSD1 Antibody - Background

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. 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.

KDM1/LSD1 Antibody - 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).