

LSD1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP1218b**Specification**

LSD1 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [O60341](#)**LSD1 Antibody (Center) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP1218b](/product/products/AP1218b) was selected from the Center region of human LSD1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LSD1 Antibody (Center) Blocking Peptide - Protein InformationName 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: [16140033](http://www.uniprot.org/citations/16140033), PubMed: [16079794](http://www.uniprot.org/citations/16079794), PubMed: [16079795](http://www.uniprot.org/citations/16079795), PubMed: [16223729](http://www.uniprot.org/citations/16223729)). Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed (PubMed: [15620353](http://www.uniprot.org/citations/15620353))

target="_blank">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:16140033, PubMed:16079794, 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. 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:20389281).

Cellular Location

Nucleus

Tissue Location

Ubiquitously expressed.

LSD1 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

LSD1 Antibody (Center) Blocking Peptide - Images

LSD1 Antibody (Center) Blocking Peptide - Background

LSD1 is a histone demethylase that specifically demethylates 'Lys-4' of histone H3, a specific tag for epigenetic transcriptional activation, thereby acting as a corepressor. LSD1 contains a SWIRM domain, a FAD-binding motif, and an amine oxidase domain. This protein is a component of several histone deacetylase complexes, though it silences genes by functioning as a histone demethylase. It acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. LSD1 demethylates both mono- and tri-methylated 'Lys-4' of histone H3. This protein may play a role in the repression of neuronal genes. Alone, it is unable to demethylate H3 'Lys-4' on

nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity. It may also demethylate 'Lys-9' of histone H3, a specific tag for epigenetic transcriptional repression, thereby leading to derepression of androgen receptor target genes.

LSD1 Antibody (Center) Blocking Peptide - References

Forneris, F., et al. FEBS Lett. 579 (10), 2203-2207 (2005) Shi, Y., et al. Cell 119 (7), 941-953 (2004) Hakimi, M.A., et al. J. Biol. Chem. 278 (9), 7234-7239 (2003) Hakimi, M.A., et al. PNAS 99 (11), 7420-7425 (2002) Humphrey, G.W., et al. J. Biol. Chem. 276 (9), 6817-6824 (2001) Ota, T., et al., Nat. Genet. 36(1):40-45 (2004).