

KDM1 / LSD1 Antibody

Rabbit mAb Catalog # AP92521

Product Information

Application WB, FC **Primary Accession** 060341

Reactivity Rat, Human, Mouse

Clonality Monoclonal

Other Names AOF2; CPRF; EC1; KDM1; Kdm1a; LSD1;

IsotypeRabbit IgGHostRabbitCalculated MW92903

Additional Information

Dilution WB 1:500~1:2000 FC 1:50 **Purification** Affinity-chromatography

Immunogen A synthesized peptide derived from human KDM1 / LSD1

Description 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.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

Protein Information

Name KDM1A (<u>HGNC:29079</u>)

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:<u>16079794</u>, PubMed:<u>16079795</u>, PubMed:<u>16140033</u>,

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:<u>21300290</u>). 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:<u>15620353</u>, PubMed:<u>20389281</u>, PubMed:<u>21300290</u>,

PubMed: <u>23721412</u>). 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: <u>16079794</u>,

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: <u>29358331</u>). 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).

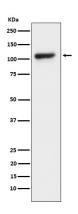
Cellular Location

Nucleus. Chromosome. Note=Associates with chromatin

Tissue Location

Ubiquitously expressed.

Images



Western blot analysis of KDM1 / LSD1 expression in HeLa cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.