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KDM1 / LSD1 Antibody

Rabbit mAb
Catalog # AP92521

Product Information

Application	WB, FC
Primary Accession	O60341
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	AOF2; CPRF; EC1; KDM1; Kdm1a; LSD1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	92903

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

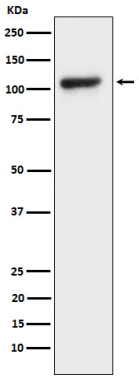
Name	KDM1A (HGNC:29079)
Function	Histone demethylase that can demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context (PubMed:15620353, PubMed:15811342, PubMed:16079794, PubMed:16079795, PubMed:16140033, PubMed:16223729, 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, PubMed:26214369). Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2) (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. [Isoform 4]: Expressed exclusively in brain tissues.

Images



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