

Rabbit KDM1A Polyclonal Antibody | anti-KDM1A antibody

KDM1A Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326069	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

KDM1A; Polyclonal Antibody; KDM1A Antibody; Amine oxidase (flavin containing) domain 2; Amine oxidase; flavin containing; 2; AOF2; BHC110; BRAF35 HDAC complex protein BHC110; BRAF35-HDAC complex protein BHC110; BRAF35/HDAC complex; 110-kD subunit; CPRF; EC1; FAD binding protein BRAF35 HDAC complex; 110 kDa subunit; Flavin-containing amine oxidase domain-containing protein 2; KDM 1; KDM1; Kdm1a; KDM1A_HUMAN; KIAA0601; LSD 1; LSD1; Lysine (K) specific demethylase 1; Lysine (K) specific demethylase 1A; Lysine demethylase 1A; Lysine specific histone demethylase 1; Lysine specific histone demethylase 1A; Lysine-specific demethylase 1; Lysine-specific demethylase 1A; Lysine-specific histone demethylase 1A; anti-KDM1A antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	KDM1A antibody detects endogenous levels of total KDM1A
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	876
Applicable Applications for anti-KDM1A antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human KDM1A
Subcellular Location	Nucleus.
Tissue Specificity	Ubiquitously expressed.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of extracts of PC12 lysate using KDM1A antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326069 at 1/100 staining Mouse colon tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-KDM1A antibody

Description: Lysine-specific demethylase 1 (LSD1; also known as AOF2 and BHC110) is a nuclear amine oxidase homolog that acts as a histone demethylase and transcription cofactor (1). Gene activation and repression is specifically regulated by the methylation state of distinct histone protein lysine residues. For example, methylation of histone H3 at Lys4 facilitates transcriptional activation by coordinating the recruitment of BPTF, a component of the NURF chromatin remodeling complex, and WDR5, a component of multiple histone methyltransferase complexes (2, 3). In contrast, methylation of histone H3 at Lys9 facilitates transcriptional repression by recruiting HP1 (4, 5). LSD1 is a component of the CoREST transcriptional co-repressor complex that also contains CoREST, CtBP, HDAC1 and HDAC2. As part of this complex, LSD1 demethylates mono-methyl and di-methyl histone H3 at Lys4 through a FAD-dependent oxidation reaction to facilitate neuronal-specific gene repression in non-neuronal cells (1, 6, 7). In contrast, LSD1 associates with androgen receptor in human prostate cells to demethylate mono-methyl and di-methyl histone H3 at Lys9 and facilitate androgen receptor-dependent transcriptional activation (8). Therefore, depending on gene context LSD1 can function as either a transcriptional co-repressor or co-activator. LSD1 activity is inhibited by the amine oxidase inhibitors pargyline, deprenyl, clorgyline and tranylcypromine (8).

Function: 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.

Subunit Structure: Component of a RCOR/GFI/KDM1A/HDAC complex (PubMed:12032298, PubMed:11102443). Interacts directly with GFI1 and GFI1B. Interacts with INSM1 (By similarity). Component of a BHC histone deacetylase complex that contains HDAC1, HDAC2, HMG20B, KDM1A, RCOR1 and PHF21A. The BHC complex may also contain ZMYM2, ZNF217, ZMYM3, GSE1 and GTF2I (PubMed:12493763, PubMed:16140033, PubMed:16885027). In the complex, RCOR1/CoREST strongly enhances the demethylase activity and protects it from the proteasome while PHF21A/BHC80 inhibits the demethylase activity (PubMed:16079794, PubMed:16956976). Interacts with the androgen receptor (AR) (PubMed:16079795). Interacts with ASXL1 (PubMed:19880879). Interacts with SNAI1 (via SNAG domain) (PubMed:20562920). Interacts (via AOD/Tower domain) with JADE2 (via C-terminus) (PubMed:25018020). Interacts with ESRRB; co-occupies the core set of ESRRB targets (By similarity).

Post-translational Modifications: Polyubiquitinated by JADE2; which leads to its proteasomal degradation.

Similarity: The SWIRM domain may act as an anchor site for a histone tail. Belongs to the flavin monoamine oxidase family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	58761544
NCBI GeneID	23028

NCBI Accession #	NP_001009999.1
NCBI GenBank Nucleotide #	NM_001009999.2
UniProt Accession #	O60341 ; Q5TH94 ; Q5TH95 ; Q86VT7 ; Q8IXK4 ; Q8NDP6 ; Q8TAZ3 ; Q96AW4 ; A8MWP9
Molecular Weight	Observed: 95 kDa Predicted: 93 kDa
NCBI Official Full Name	lysine-specific histone demethylase 1A isoform a
NCBI Official Synonym Full Names	lysine demethylase 1A
NCBI Official Symbol	KDM1A
NCBI Official Synonym Symbols	AOF2; CPRF; KDM1; LSD1; BHC110
NCBI Protein Information	lysine-specific histone demethylase 1A
UniProt Protein Name	Lysine-specific histone demethylase 1A
UniProt Gene Name	KDM1A
UniProt Synonym Gene Names	AOF2; KDM1; KIAA0601; LSD1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/kdm1a-antibody-immunohistochemistry-western-blot-elisa/326069>