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

LSD1 (aa 400-450) Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11113

Specification

LSD1 (aa 400-450) Antibody - Product Information

Application	**WB**
Primary Accession	O60341
Reactivity	**Human, Mouse, Monkey, Chimpanzee, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**92903**

LSD1 (aa 400-450) Antibody - Additional Information

Gene ID 23028

Positive Control	**Western blot: Jurkat cell lysate, NIH 3T3 cell lysate**
Application & Usage	**Western blot: 1-3 µg/ml. However, the optimal conditions should be determined individually.**

Other Names
Lysine-specific histone demethylase 1A (BRAF35-HDAC complex protein BHC110) (Flavin-containing amine oxidase domain-containing protein 2)

Target/Specificity
LSD1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
50 µg of antibody in 100 µl PBS containing 0.05% BSA and 0.05% sodium azide.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions

LSD1 (aa 400-450) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

LSD1 (aa 400-450) 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:16140033, PubMed:16079794, PubMed:16079795, PubMed:16223729). 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: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

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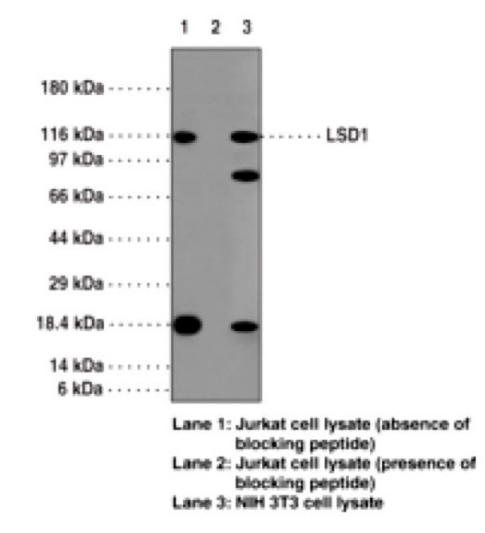
Tissue Location
Ubiquitously expressed.

LSD1 (aa 400-450) Antibody - Protocols

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

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

LSD1 (aa 400-450) Antibody - Images



WB using LSD1 pAb. Lane1:Jurkat cell lysate(absence of blocking peptide); Lane2: Jurkat cell lysate(presence of blocking peptide); Lane3:NIH/3T3 cell lysate.

LSD1 (aa 400-450) Antibody - Background

LSD1 the first known lysine-specific histone demethylase, is an 866 amino acid nuclear protein belonging to flavin monoamine oxidase family. It contains a SWIRM domain, a FAD-binding motif and an amine oxidase domain. This protein is ubiquitously expressed and is a component of several histone deacetylase complexes. LSD1 acts as a component of the CoREST and other transcriptional co-repressor complexes and also plays an important role in silencing neuronal-specific genes in non-neuronal cells. It is also known to demethylate Lys4 of histone H3, a specific tag for epigenetic transcriptional activation. Reports s µggest that that LSD1 plays an important role in stimulating androgen-receptor-dependent transcription converting oxygen to hydrogen peroxide (might use alternative electron acceptors). Along with nuclear FHL2, LSD1 serves as a novel biomarker predictive for prostate cancer.