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Rabbit Anti-KDM1/LSD1 antibody

SL10166R

Product Name	KDM1/LSD1
Chinese Name	组蛋白赖氨酸特异性脱甲基酶 1 抗体
Alias	Amine oxidase (flavin containing) domain 2; Amine oxidase flavin containing domain 2; Amine oxidase flavin containing domain protein 2; AOF 2; AOF2; BHC110; BRAF35 HDAC complex protein BHC110; BRAF35-HDAC complex protein BHC110; FAD binding protein BRAF35 HDAC complex, 110 kDa subunit; Flavin containing amine oxidase domain containing protein 2; Flavin-containing amine oxidase domain-containing protein 2; KDM 1; Kdm1a; KDM1A_HUMAN; KIAA0601; LSD 1; LSD1; Lysine (K) specific demethylase 1; Lysine (K) specific demethylase 1A; Lysine specific histone demethylase 1; Lysine specific histone demethylase 1A; Lysine-specific histone demethylase 1; Lysine-specific histone demethylase 1A.
Research Area	Tumour immunology Chromatin and nuclear signals transcriptional regulatory factor Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat, (predicted: Chicken, Dog, Pig, Cow, Rabbit,)
Applications	WB=1:500-2000,ICC/IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	94kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human KDM1: 301-400/852
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Solution

Storage Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed PubMed

Product Detail

Gene activation and repression is specifically regulated by histone methylation status at distinct lysine residues. Lysine specific demethylase 1 (KDM1/LSD1) is a long-sought histone demethylase that specifically demethylates mono and di methyl histone H3 at K4 and K9. Thus KDM1 is a specific tag for epigenetic transcriptional activation, thereby acting as a corepressor.

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.

Subunit:
Component of a RCOR/GFI/KDM1A/HDAC complex. Interacts directly with GFI1 and GFI1B (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. In the complex, RCOR1/CoREST strongly enhances the demethylase activity and protects it from the proteasome while PHF21A/BHC80 inhibits the demethylase activity. Interacts with the androgen receptor (AR). Interacts with ASXL1.

Subcellular Location:

Nucleus.

Tissue Specificity:
Ubiquitously expressed.

Similarity:
Belongs to the flavin monoamine oxidase family.
Contains 1 SWIRM domain.

SWISS:
O60341

Gene ID:
23028

Database links:

Entrez Gene: 23028 Human

Entrez Gene: 99982 Mouse

Entrez Gene: 500569 Rat

Omim: 609132 Human

SwissProt: O60341 Human

SwissProt: Q6ZQ88 Mouse

Unigene: 591518 Human

Unigene: 28540 Mouse

Unigene: 203461 Rat

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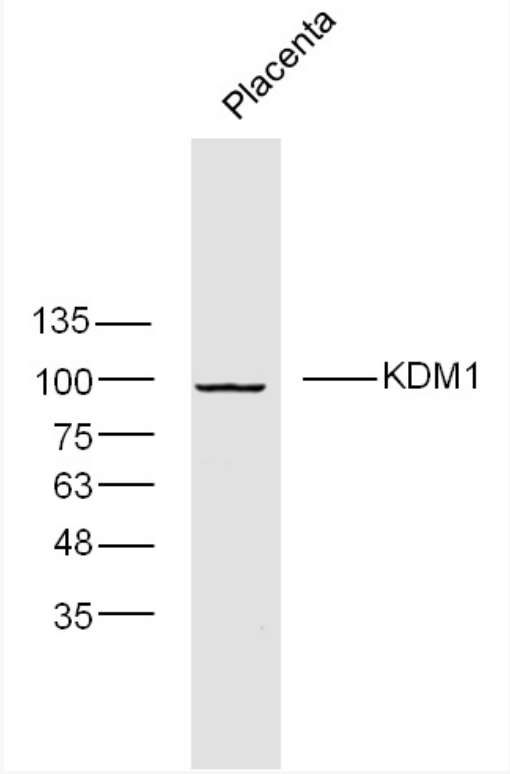
Product Picture



Sample: placenta (Mouse) Lysate at 40 ug

Primary: Anti-KDM1(SL10166R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 94 kD

Observed band size: 94 kD

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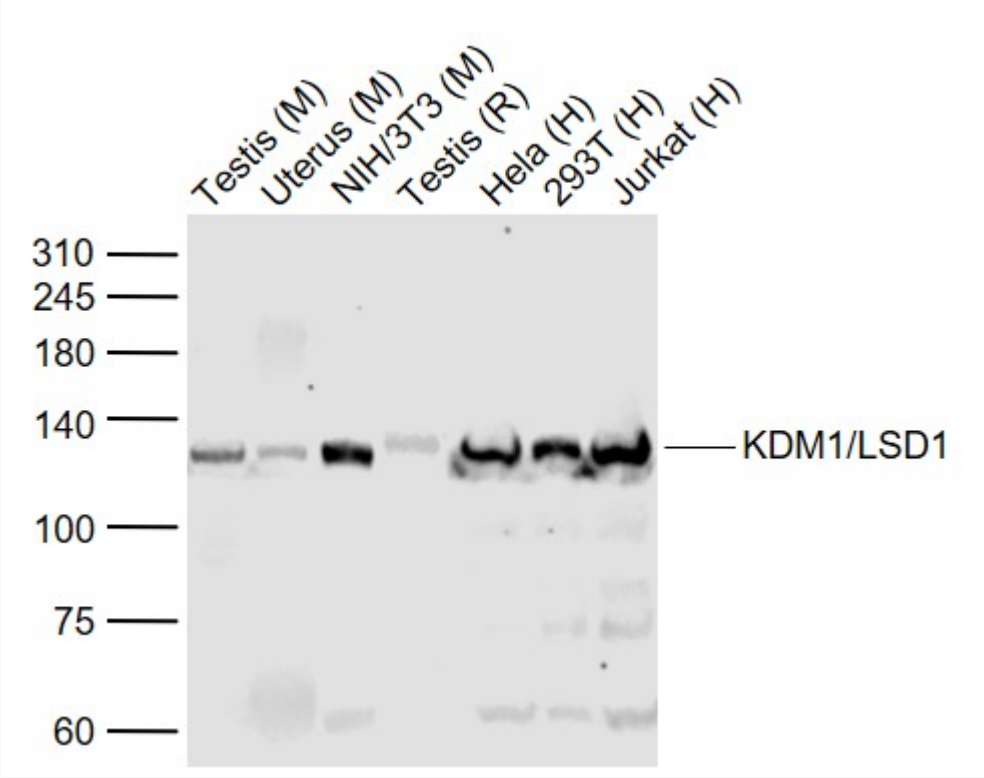


Sample:

Lane 1: Testis (Mouse) Lysate at 40 ug

Lane 2: Uterus (Mouse) Lysate at 40 ug

Lane 3: NIH/3T3 (Mouse) Cell Lysate at 30 ug

Lane 4: Testis (Rat) Lysate at 40 ug

Lane 5: Hela (Human) Cell Lysate at 30 ug

Lane 6: 293T (Human) Cell Lysate at 30 ug

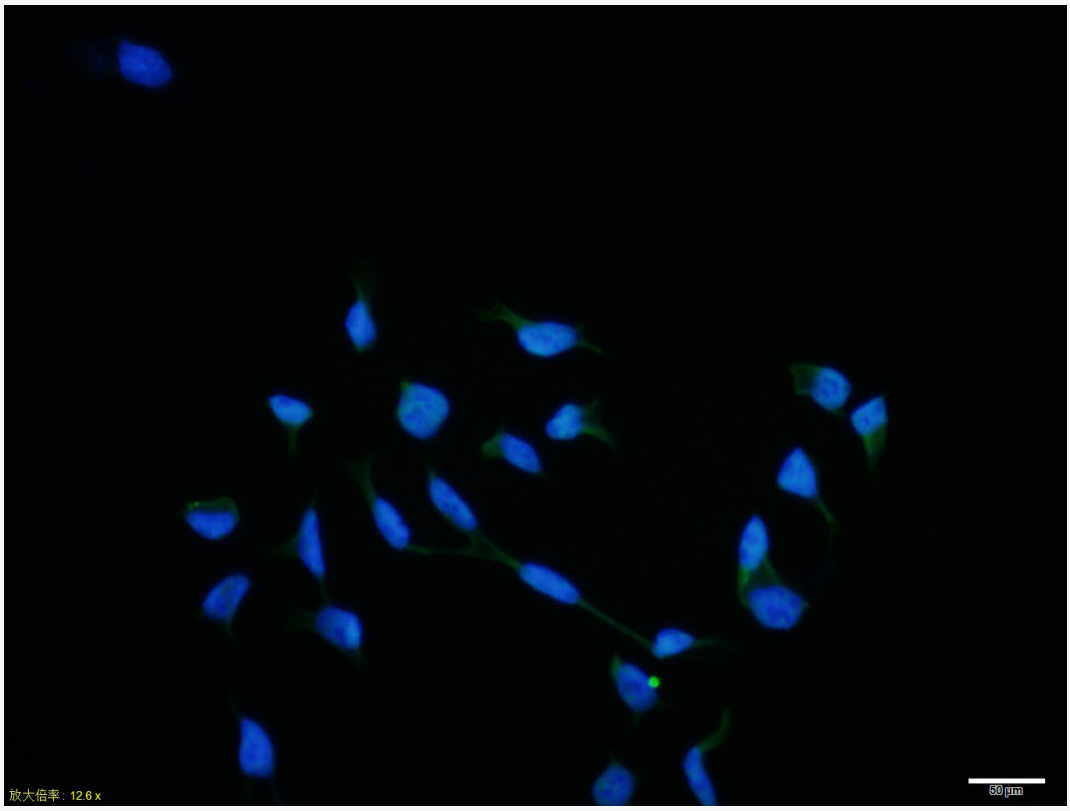
Lane 7: Jurkat (Human) Cell Lysate at 30 ug

Primary: Anti-KDM1/LSD1 (SL10166R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 120 kD

Observed band size: 120 kD



Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (KDM1/LSD1) polyclonal Antibody, Unconjugated (SL10166R) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.