



Qty: 100µg/200µL

Mouse anti-LSD1

Catalog No. 41-3300

Lot No.

## Mouse anti-LSD1

### FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

**CLONE:** 1B2E5

**ISOTYPE:** Mouse IgG1-kappa

### IMMUNOGEN

Recombinant protein derived from the internal region of human LSD1 protein, which is 99% homologous with mouse, and 98% homologous with rat, bovine, dog, Rhesus monkey and chimpanzee

### SPECIFICITY

This antibody is specific for the LSD1 (lysine-specific histone demethylase 1, flavin-containing amine oxidase domain-containing protein 2, BRAF35-HDAC complex protein BHC110) protein. On Western blots, it identifies the target band at ~105 kDa.

### REACTIVITY

Reactivity has been confirmed with HeLa, Jurkat and A431 cell lysates and paraffin-embedded human breast carcinoma, bladder transitional-cell carcinoma, esophagus squamous cell carcinoma, lung squamous cell carcinoma, malignant peritoneal mesothelioma, ovary adenocarcinoma and skin squamous cell carcinoma. Based on amino acid sequence homology, reactivity with mouse, rat, bovine, dog, Rhesus monkey and chimpanzee is also expected.

Sample	Immuno-precipitation (native)	Immuno-histochemistry (paraffin)	Western Blotting
Human	+++	+++	+++
Mouse	ND	ND	ND
Rat	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Immunoprecipitation:** 5 µg/IP reaction  
**Immunohistochemistry (paraffin):** 5-10 µg/mL  
**Western Blotting:** 2 µg/mL

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

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## BACKGROUND

Histone modifications, such as acetylation, phosphorylation, and methylation, are the switches that alter chromatin structure or form a binding platform for downstream "effector" proteins to allow transcriptional activation or repression. Histone modifications are an important component of human disease, notably cancer.<sup>1</sup>

LSD1 (lysine-specific histone demethylase), is a nuclear amine oxidase homolog that catalyzes demethylation.<sup>2</sup> LSD1 is highly conserved between organisms and contains a carboxyl-terminal amine oxidase domain as well as a centrally located SWIRM domain, a protein-protein interaction motif found in multiple chromatin-associated proteins. The oxidation reaction catalyzed by LSD1 is dependent on the cofactor flavin adenine dinucleotide (FAD) and generates an unmodified lysine and a formaldehyde byproduct at the end of its catalytic cycle.

Androgen receptor belongs to a nuclear-receptor family of proteins that, upon binding of ligand, regulates expression of genes containing androgen-response DNA elements. LSD1 has been described in association with the androgen receptor and, surprisingly, acts as a coactivator for transcriptional activation by the androgen receptor.<sup>3</sup>

## REFERENCES

1. Seligson DB, et al. *Nature* 435(7046):1262-6, 2005.
2. Shi Y, et al. *Cell* 119(7):941-53, 2004.
3. Metzger E, et al. *Nature* 437(7057):436-9, 2005.

## RELATED PRODUCTS

<b>Product</b>	<b>Conjugate</b>	<b>Cat. No.</b>
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

<b>Conjugate</b>	<b>ZyMAX™ Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX™ Goat x Mouse IgG (H+L)</b>
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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