

LSD1 (H-220): sc-67272

BACKGROUND

Histone methylation regulates chromatin structure and transcription and maintains an epigenetic state of the cell. Histone methylation is dynamically regulated by histone methylases and demethylases. Lysine-specific histone demethylase 1 (LSD1), also designated BHC110, is a flavin-dependent amine oxidase which catalyzes the removal of one or two methyl groups from the methyl-lysine-4 side chain of Histone H3. The LSD1 protein contains a SWIRM domain, a FAD-binding motif and an amine oxidase domain. Association with CoREST, a SANT domain-containing corepressor, positively regulates LSD1. CoREST mediates the demethylation ability of LSD1 and protects it from proteasomal degradation *in vivo*. PHF21A (also designated BCH80), a PHD domain-containing protein, inhibits activity of LSD1/CoREST mediated demethylation. The LSD1 protein also co-localizes with the androgen receptor in human prostate tumor cells and in unaffected prostate cells, stimulating androgen-receptor-dependent transcription.

REFERENCES

- Shi, Y., et al. 2004. Histone demethylation mediated by the nuclear amine oxidase homolog LSD1. *Cell* 119: 941-953.
- Trethewey, S.C., et al. 2005. Methylation: lost in hydroxylation? *EMBO Rep.* 6: 315-320.
- Shi, Y.J., et al. 2005. Regulation of LSD1 histone demethylase activity by its associated factors. *Mol. Cell* 19: 857-864.
- Wysocka, J., et al. 2005. Taking LSD1 to a new high. *Cell* 122: 654-658.
- Lee, M.G., et al. 2005. An essential role for CoREST in nucleosomal Histone 3 Lysine 4 demethylation. *Nature* 437: 432-435.
- Forneris, F., et al. 2005. Histone demethylation catalysed by LSD1 is a flavin-dependent oxidative process. *FEBS Lett.* 579: 2203-2207.

CHROMOSOMAL LOCATION

Genetic locus: KDM1A (human) mapping to 1p36.12; Kdm1a (mouse) mapping to 4 D3.

SOURCE

LSD1 (H-220) is a rabbit polyclonal antibody raised against amino acids 581-800 mapping near the C-terminus of LSD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

LSD1 (H-220) is recommended for detection of LSD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LSD1 (H-220) is also recommended for detection of LSD1 in additional species, including equine, canine, bovine, porcine and avian.

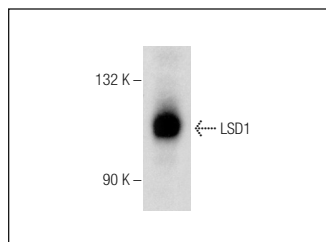
Suitable for use as control antibody for LSD1 siRNA (h): sc-60970, LSD1 siRNA (m): sc-60971, LSD1 shRNA Plasmid (h): sc-60970-SH, LSD1 shRNA Plasmid (m): sc-60971-SH, LSD1 shRNA (h) Lentiviral Particles: sc-60970-V and LSD1 shRNA (m) Lentiviral Particles: sc-60971-V.

LSD1 (H-220) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

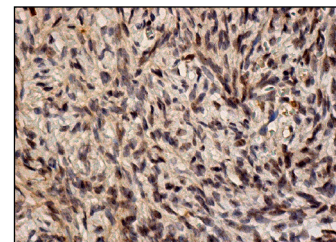
Molecular Weight of LSD1: 107 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, PC-3 nuclear extract: sc-2152 or Jurkat nuclear extract: sc-2132.

DATA



LSD1 (H-220): sc-67272. Western blot analysis of LSD1 expression in PC-3 nuclear extract.



LSD1 (H-220): sc-67272. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear staining of ovarian stroma cells.

SELECT PRODUCT CITATIONS

- Cui, S., et al. 2011. Nuclear receptors TR2 and TR4 recruit multiple epigenetic transcriptional corepressors that associate specifically with the embryonic β -type globin promoters in differentiated adult erythroid cells. *Mol. Cell. Biol.* 31: 3298-3311.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **LSD1 (B-9): sc-271720** or **LSD1 (2D6): sc-136174**, our highly recommended monoclonal alternatives to LSD1 (H-220). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **LSD1 (B-9): sc-271720**.