

LSD1 (C-19): sc-49291

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*. 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

1. Shi, Y., et al. 2004. Histone demethylation mediated by the nuclear amine oxidase homolog LSD1. *Cell* 119: 941-53.
2. Treweek, S.C., et al. 2005. Methylation: lost in hydroxylation? *EMBO Rep.* 6: 315-320.
3. Shi, Y.J., et al. 2005. Regulation of LSD1 histone demethylase activity by its associated factors. *Mol. Cell* 19: 857-864.
4. Wysocka, J., et al. 2005. Taking LSD1 to a new high. *Cell* 122: 654-658.
5. Lee, M.G., et al. 2005. An essential role for CoREST in nucleosomal Histone 3 Lysine 4 demethylation. *Nature* 437: 432-435.
6. Metzger, E., et al. 2005. LSD1 demethylates repressive histone marks to promote androgen-receptor-dependent transcription. *Nature* 437: 436-439.
7. 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: AOF2 (human) mapping to 1p36.12; Aof2 (mouse) mapping to 4 D3.

SOURCE

LSD1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at 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.

Blocking peptide available for competition studies, sc-49291 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

LSD1 (C-19) 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), immunofluorescence (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 (C-19) 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 siRNA (r): sc-156072, LSD1 shRNA Plasmid (h): sc-60970-SH, LSD1 shRNA Plasmid (m): sc-60971-SH, LSD1 shRNA Plasmid (r): sc-156072-SH, LSD1 shRNA (h) Lentiviral Particles: sc-60970-V, LSD1 shRNA (m) Lentiviral Particles: sc-60971-V and LSD1 shRNA (r) Lentiviral Particles: sc-156072-V.

LSD1 (C-19) 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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **LSD1 (B-9): sc-271720** or **LSD1 (2D6): sc-136174**, our highly recommended monoclonal alternatives to LSD1 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **LSD1 (B-9): sc-271720**.