

LSD1 (P-20): sc-49294

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: 941-953.
2. Forneris, F., et al. 2005. Histone demethylation catalysed by LSD1 is a flavin-dependent oxidative process. *FEBS Lett.* 579: 2203-2207.
3. Lee, M.G., et al. 2005. An essential role for CoREST in nucleosomal Histone 3 lysine 4 demethylation. *Nature* 437: 432-435.
4. Metzger, E., et al. 2005. LSD1 demethylates repressive histone marks to promote androgen-receptor-dependent transcription. *Nature* 437: 436-439.
5. Shi, Y.J., et al. 2005. Regulation of LSD1 histone demethylase activity by its associated factors. *Mol. Cell* 19: 857-864.

CHROMOSOMAL LOCATION

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

SOURCE

LSD1 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-49294 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-49294 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

LSD1 (P-20) 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 (P-20) is also recommended for detection of LSD1 in additional species, including equine, canine, bovine, porcine and avian.

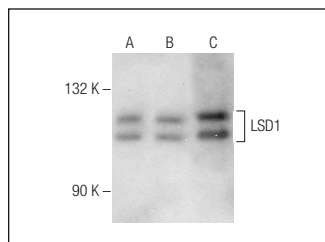
Suitable for use as control antibody for LSD1 siRNA (h): sc-60970, LSD1 siRNA (m): sc-60971, LSD1 siRNA (r): sc-156072, LSD1 shRNA Plasmid (h): sc-60970-SH, LSD1 shRNA Plasmid (m): sc-60971-SH, LSD1 shRNA Plasmid (r): sc-156072-SH, LSD1 shRNA (h) Lentiviral Particles: sc-60970-V, LSD1 shRNA (m) Lentiviral Particles: sc-60971-V and LSD1 shRNA (r) Lentiviral Particles: sc-156072-V.

LSD1 (P-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LSD1: 107 kDa.

Positive Controls: SK-BR-3 nuclear extract: sc-2134, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

DATA



LSD1 (P-20): sc-49294. Western blot analysis of LSD1 expression in Jurkat (A), SKBR-3 (B) and K-562 (C) nuclear extracts.

RESEARCH USE

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

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 (P-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **LSD1 (B-9): sc-271720**.