

LSD1 (B-9): sc-271720

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

- Shi, Y., et al. 2004. Histone demethylation mediated by the nuclear amine oxidase homolog LSD1. *Cell* 119: 941-953.
- Fornieris, F., et al. 2005. Histone demethylation catalysed by LSD1 is a flavin-dependent oxidative process. *FEBS Lett.* 579: 2203-2207.
- Lee, M.G., et al. 2005. An essential role for CoREST in nucleosomal Histone 3 lysine 4 demethylation. *Nature* 437: 432-435.

CHROMOSOMAL LOCATION

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

SOURCE

LSD1 (B-9) is a mouse monoclonal antibody raised against amino acids 581-800 mapping near the C-terminus of LSD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271720 X, 200 µg/0.1 ml.

LSD1 (B-9) is available conjugated to agarose (sc-271720 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271720 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271720 PE), fluorescein (sc-271720 FITC), Alexa Fluor® 488 (sc-271720 AF488), Alexa Fluor® 546 (sc-271720 AF546), Alexa Fluor® 594 (sc-271720 AF594) or Alexa Fluor® 647 (sc-271720 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271720 AF680) or Alexa Fluor® 790 (sc-271720 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

LSD1 (B-9) is recommended for detection of LSD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

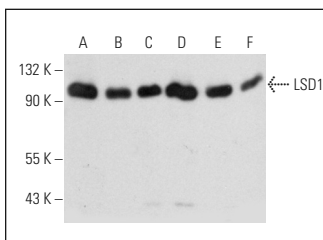
Suitable for use as control antibody for LSD1 siRNA (h): sc-60970, LSD1 siRNA (m): sc-60971, LSD1 siRNA (r): sc-156072, LSD1 shRNA Plasmid (h): sc-60970-SH, LSD1 shRNA Plasmid (m): sc-60971-SH, LSD1 shRNA Plasmid (r): sc-156072-SH, LSD1 shRNA (h) Lentiviral Particles: sc-60970-V, LSD1 shRNA (m) Lentiviral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

LSD1 (B-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

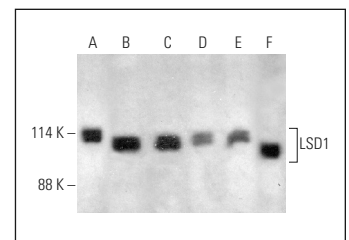
Molecular Weight of LSD1: 107 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat nuclear extract: sc-2132 or SK-BR-3 nuclear extract: sc-2134.

DATA



LSD1 (B-9): sc-271720. Western blot analysis of LSD1 expression in HeLa (A), A-431 (B), NIH/3T3 (C), Neuro-2A (D), PC-12 (E) and NRK (F) whole cell lysates.



LSD1 (B-9) HRP: sc-271720 HRP. Direct western blot analysis of LSD1 expression in Jurkat (A), SK-BR-3 (B), K-562 (C) and PC-3 (D) nuclear extracts and SW480 (E) and Neuro-2A (F) whole cell lysates.

SELECT PRODUCT CITATIONS

- El Omari, K., et al. 2013. Structural basis for LMO2-driven recruitment of the SCL:E47bHLH heterodimer to hematopoietic-specific transcriptional targets. *Cell Rep.* 4: 135-147.
- Jeong, O.S., et al. 2016. Long noncoding RNA linc00598 regulates CCND2 transcription and modulates the G₁ checkpoint. *Sci. Rep.* 6: 32172.
- Jung, H., et al. 2017. Regulatory role of G9a and LSD1 in the transcription of glfactory receptors during leukaemia cell differentiation. *Sci. Rep.* 7: 46182.
- Haines, R.R., et al. 2019. LSD1 cooperates with noncanonical NFκB signaling to regulate marginal zone B cell development. *J. Immunol.* 203: 1867-1881.
- Bally, A.P.R., et al. 2020. PD-1 expression during acute infection is repressed through an LSD1-Blimp-1 axis. *J. Immunol.* 204: 449-458.

RESEARCH USE

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