

#2184 Store at -20°C

# LSD1 (C69G12) Rabbit mAb

✓ 100 µl  
(10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IHC-F, IF-IC Endogenous	H, M, R, Mk	110 kDa	Rabbit IgG**

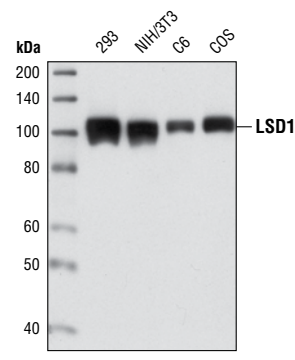
**Background:** Lysine-specific demethylase 1 (LSD1; also known as AOF2 and BHC110) is a nuclear amine oxidase homolog that acts as a histone demethylase and transcription cofactor (1). Gene activation and repression is specifically regulated by the methylation state of distinct histone protein lysine residues. For example, methylation of histone H3 at Lys4 facilitates transcriptional activation by coordinating the recruitment of BPTF, a component of the NURF chromatin remodeling complex, and WDR5, a component of multiple histone methyltransferase complexes (2,3). In contrast, methylation of histone H3 at Lys9 facilitates transcriptional repression by recruiting HP1 (4,5). LSD1 is a component of the CoREST transcriptional co-repressor complex that also contains CoREST, CtBP, HDAC1 and HDAC2. As part of this complex, LSD1 demethylates mono-methyl and di-methyl histone H3 at Lys4 through a FAD-dependent oxidation reaction to facilitate neuronal-specific gene repression in non-neuronal cells (1,6,7). In contrast, LSD1 associates with androgen-receptor in human prostate cells to demethylate mono-methyl and di-methyl histone H3 at Lys9 and facilitate androgen-receptor-dependent transcriptional activation (8). Therefore, depending on gene context LSD1 can function as either a transcription co-repressor or co-activator. LSD1 activity is inhibited by the amine oxidase inhibitors pargyline, deprenyl, clogyline and tranlylcypromine (8).

**Specificity/Sensitivity:** LSD1 (C69G12) Rabbit mAb detects endogenous levels of total LSD1 protein.

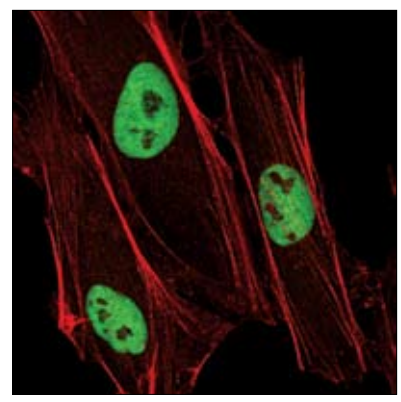
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino-terminus of human LSD1 protein.

**Background References:**

- (1) Shi, Y. et al. (2004) *Cell* 119, 941–953.
- (2) Wysocka, J. et al. (2006) *Nature* 442, 86–90.
- (3) Wysocka, J. et al. (2005) *Cell* 121, 859–872.
- (4) Jacobs, S.A. and Khorasanizadeh, S. (2002) *Science* 295, 2080–2083.
- (5) Nielsen, P.R. et al. (2002) *Nature* 416, 103–107.
- (6) Shi, Y.J. et al. (2005) *Mol. Cell* 19, 857–864.
- (7) Lee, M.G. et al. (2005) *Nature* 437, 432–435.
- (8) Metzger, E. et al. (2005) *Nature* 437, 436–439.



Western blot analysis of cell lysates from various cell types using LSD1 (C69G12) Rabbit mAb.



Confocal immunofluorescent analysis of HeLa cells using LSD1 (C69G12) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red).

Entrez-Gene ID # 23028  
Swiss-Prot Acc. # O60341 (H), Q6ZQ88 (M)

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:25
Immunohistochemistry (Paraffin)	1:800
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5%NGS
Immunohistochemistry (Frozen)	1:800
Fixative:	10% neutral buffered formalin
Immunofluorescence (IF-IC)	1:400

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

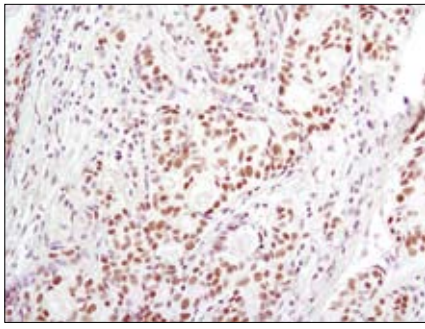
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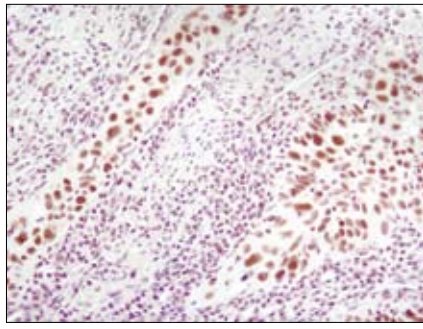
**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

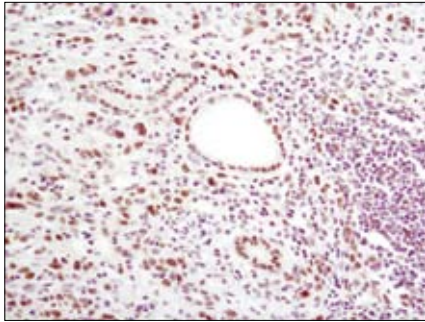
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



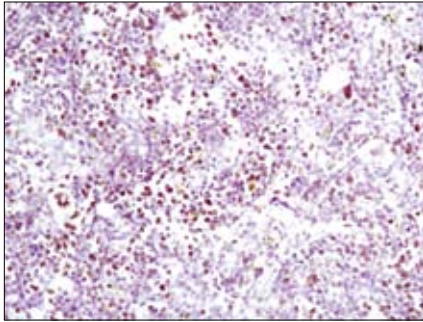
*Immunohistochemical analysis of paraffin-embedded human breast carcinoma using LSD1 (C69G12) Rabbit mAb.*



*Immunohistochemical analysis of paraffin-embedded human lung carcinoma using LSD1 (C69G12) Rabbit mAb.*



*Immunohistochemical analysis of paraffin-embedded human stomach carcinoma using LSD1 (C69G12) Rabbit mAb.*



*Immunohistochemical analysis of frozen mouse spleen using LSD1 (C69G12) Rabbit mAb.*