

## BACKGROUND

Lysine-specific demethylase 1 (LSD1; also known as BHC110) is a flavin-dependent monoamine oxidase, which can demethylate mono- and dimethylated lysines, specifically histone 3, lysines 4 and 9 (H3K4 and H3K9).<sup>1</sup> Through a FAD-dependent oxidative reaction, LSD1 specifically removes histone H3K4me<sub>2</sub> to H3K4me<sub>1</sub> or H3K4me<sub>0</sub>. When forming a complex with androgen receptor (and possibly other nuclear hormone receptors), LSD1 changes its substrates to H3K9me<sub>2</sub>. LSD1 relieves repressive histone marks by demethylation of histone H3 at lysine 9 (H3-K9), thereby leading to de-repression of androgen receptor target genes.<sup>2</sup> Functions of other components in LSD1 complex, such as CoREST and BHC80, as well as p53, have been further studied.<sup>3,4</sup> It's now known LSD1 complex mediates a coordinated histone modification switch through enzymatic activities as well as histone modification readers in the complex.

### References:

1. Forneris, F. et al: Trends Biochem Sci.33:181, 2008.
2. Culhane, J.C. & Cole, P. A.: Curr Opin Chem Biol. 11:561, 2007.
3. Urbanucci, A. et al: BMC Cancer. 8:219, 2008.
4. Tsai, W.W. et al: Mol. Cell. Biol. 28:5139, 2008

## TECHNICAL INFORMATION

### Source:

*E. coli*-expressed recombinant human LSD1 protein fragments.

### Specificity and Sensitivity:

This antibody specifically detects endogenous levels of LSD1 proteins. This antibody does not cross-react with other related proteins.

**Storage Buffer:** PBS and 30% glycerol

### Storage:

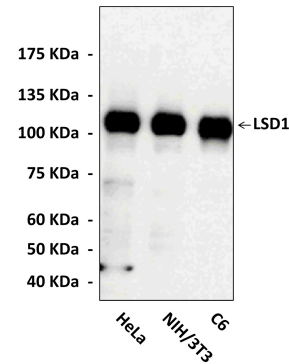
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

## APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	n/d
ICC	n/d
FACS	n/d

*\*Optimal dilutions must be determined by end user.*

## QUALITY CONTROL DATA



Specific detection of LSD1 proteins by Western Blot, using LSD1 (2H5) Mouse Monoclonal Antibody, in various cell lysates: HeLa, NIH-3T3, C6.

