

Product Information

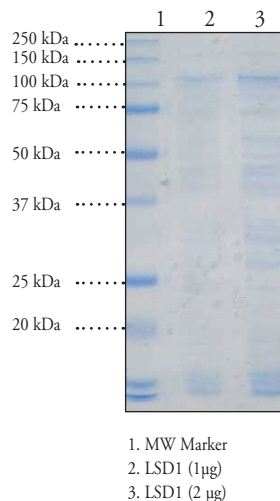
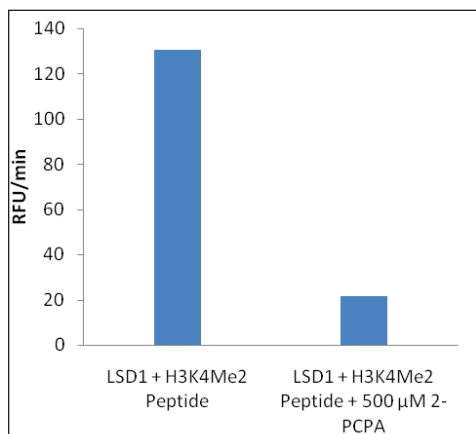


LSD1 (human recombinant)

Catalog No. 10245 • Lot. No. XXXXXX

Synonyms: AOF2, BHC110, KDM1, Lysine-Specific Demethylase 1, NPAO, p110b
Source: Human recombinant N-terminal hexahistidine-tagged enzyme expressed in *E. coli*; BC048134
M_r: 94 kDa
Purity: >50%
Stability: ≥6 months at -80°C. For long term storage aliquot the protein and store at -80°C.
Supplied in: 50 mM sodium phosphate, pH 7.2 containing 100 mM sodium chloride and 20% glycerol
Protein Concentration: XX mg/ml
Activity: XX U/ml
Specific Activity: XX U/mg; One unit is defined as the amount of enzyme required to produce 1 picomole of H₂O₂ per minute at 37°C in 50 mM Hepes, pH 7.5 containing 25 μM FAD, 100 μM H3K4Me2 peptide (amino acids 1-21), 50 μM ADHP, and 4.2 U/ml horseradish peroxidase.

LSD1 (lysine-specific demethylase 1) belongs to the family of flavin adenine dinucleotide (FAD)-dependent amine oxidases that include monoamine oxidases (MAOs) and polyamine oxidase (PAO).¹ LSD1 is a component of several histone deacetylase co-repressor complexes, including histone deacetylases 1/2, CtBP, and the neuronal CoREST complexes.² LSD1, with the help of its co-factor CoREST, specifically demethylates mono- and dimethylated histone H3 lysine 4 (H3-K4), resulting in transcriptional repression.³ In addition to demethylating histones, LSD1 controls the tumor suppressor activity of p53 by demethylating a specific p53 lysine residue (LYS370).⁴ This activity does not seem to require CoREST and p53 demethylation of LYS370 prevents p53 interaction with its co-activator 53BP1 to induce apoptosis.⁴⁻⁷



References

1. Shi, Y., Lan, F., Matson, C., *et al. Cell* **119**, 941-953 (2004).
2. Shi, Y.-J., Matson, C., Lan, F., *et al. Molecular Cell* **19**, 864 (2005).
3. Forneris, F., Binda, C., Vanoni, M.A., *et al. J. Biol. Chem.* **280**(50), 41360-41365 (2005).
4. Huang, J., Sengupta, R., Espejo, A.B., *et al. Nature* **449**, 105-108 (2007).
5. Scoumanne, A. and Chen, X. *J. Biol. Chem.* **282**(21), 15471-15475 (2007).
6. Tsai, W.-W., Nguyen, T.T., Shi, Y., *et al. Mol. Cell. Biol.* **28**(17), 5139-5146 (2008).
7. Scoumanne, A. and Chen, X. *Histol. Histopathol.* **23**, 1143-1149 (2008).

Related Products

LSD1 Polyclonal Antibody (aa 450-500) - Cat. No. 13486 • LSD1 Polyclonal Antibody (aa 400-450) - Cat. No. 13553 • LSD1 Polyclonal Antibody (aa 100-150) - Cat. No. 13554 • LSD1 Polyclonal Antibody (aa 800-850) - Cat. No. 13555 • LSD1 Inhibitor Screening Assay Kit - Cat. No. 700120 • HDAC1 (human recombinant) - Cat. No. 10009231 • HDAC3 (human recombinant) - Cat. No. 10009232 • HDAC2 (human recombinant) - Cat. No. 10009377 • Chromium (III) chloride, hexahydrate - Cat. No. 10009329 • HDAC8 (human recombinant) - Cat. No. 10009380 • HDAC6 (human recombinant) - Cat. No. 10009465 • HDAC9 (human recombinant) - Cat. No. 10009466 • 2-PCPA (hydrochloride) - Cat. No. 10010494 • SIRT1 (human recombinant) - Cat. No. 10011190

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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