

Lysine-specific histone demethylase1 with REST corepressor1

Cat. No. CBCRY04 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Source	E.coli
Background	Histone modifications, such as acetylation and methylation, are important epigenetic marks that regulate diverse biological processes that use chromatin as the template, including transcription. Dysregulation of histone acetylation and methylation leads to the silencing of tumor suppressor genes and contributes to cancer progression. Inhibitors of enzymes that catalyze the addition and removal of these epigenetic marks thus have therapeutic potential for treating cancer. Lysine-specific demethylase 1 (LSD1) is the first discovered histone lysine demethylase and, with the help of its cofactor CoREST, specifically demethylates mono- and dimethylated histone H3 lysine 4 (H3-K4), thus repressing transcription.
Protein Classification	Oxidoreductase/repressor
Structure Weight	101692.78 Da
Polymer	1
Molecule	Lysine-specific Histone Demethylase 1
Chain Length	666 amino acids
PDB ID	2UXX

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MMDB ID	59741
Method	X-Ray Diffraction
Resolution	2.74Å
Ligand Chemical Component	chloride ion, FA9, glycerol
Reference	Yang, M., Culhane, J.C., Szewczuk, L.M., Jalili, P., Ball, H.L., Machius, M., Cole, P. A., Yu, H. Structural Basis for the Inhibition of the Lsd1 Histone Demethylase by the Antidepressant Trans-2-Phenylcyclopropylamine. <i>Biochemistry</i> , 2007,46: 8058-8065

GENE INFORMATION

Gene Name	KDM1
Synonyms	RP1-184J9.1; AOF2; BHC110; KIAA0601; LSD1; BRAF35-HDAC complex protein BHC110; FAD-binding protein BRAF35-HDAC complex, 110 kDa subunit; amine oxidase (flavin containing) domain 2; lysine-specific histone demethylase 1; Flavin-containing amine oxidase domain-containing protein 2; lysine (K)-specific demethylase 1; EC 1.-.-.-; fad binding protein braf35 hdac complex 110 kda s; amine oxidase (flavin containing) domain 2
UniProt ID	O60341
Chromosome Location	1p36.12
Function	FAD binding; electron carrier activity; oxidoreductase activity; transcription factor activity; transcription factor binding

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