

Recombinant LSD1 / KDM1A protein

Catalog No: 31426, 31826

Expressed In: Baculovirus

Quantity: 20 µg

Concentration: 0.4 µg/µl

Source: Human

Buffer Contents: Full length recombinant KDM1A / LSD1 protein was expressed in Sf9 cells at a concentration of 0.4 µg/µl in 25 mM Hepes pH 7.5, 300 mM NaCl, 5% Glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

Background: **LSD1 (Lysine-specific demethylase 1, also designated KDM1A)** was identified as a subunit of different complexes (such as CTBP, CoREST, NuRD or BRAF35). **LSD1** is involved in transcriptional repression of genes through the demethylation of Histone H3 monomethyl Lys4 and Histone H3 dimethyl Lys4, a methylation site associated with transcriptional activation. **LSD1** is also involved in transcriptional activation through the demethylation of Histone H3 monomethyl Lys9 and Histone H3 dimethyl Lys9, a modification often associated with transcriptional repression. **LSD1** is also able to demethylate Lys370me1 and Lys370me2 in the regulatory domain of the tumor suppressor p53. **LSD1** is a flavin-dependent amine oxidase.

Protein Details: Recombinant LSD1 / KDM1A (accession number NP_055828) was expressed in Sf9 cells and contains an N-terminal FLAG tag with a molecular weight of 97.1 kDa. The recombinant protein is >90% pure by SDS-PAGE.

Application Notes: Recombinant LSD1 / KDM1A is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

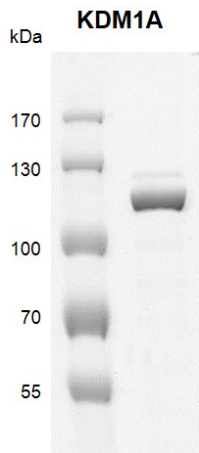
Specific Activity: H3K4me2 and H3K4me1 demethylase.

Catalytic Ability: > 600 turnovers / enzyme molecule.

Histone Demethylase Assay Conditions: 3.3 µM H3K4me2 (1-21aa) peptide was incubated with 5 nM KDM1A / LSD1 in reaction buffer containing 50 mM TrisCl, pH 8.0, 0.02% Triton X-100, 50 nM FAD for 1 hours at room temperature. MALDI-TOF were used for detection.

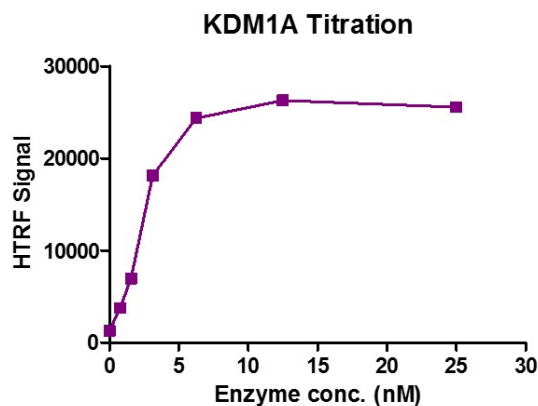
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



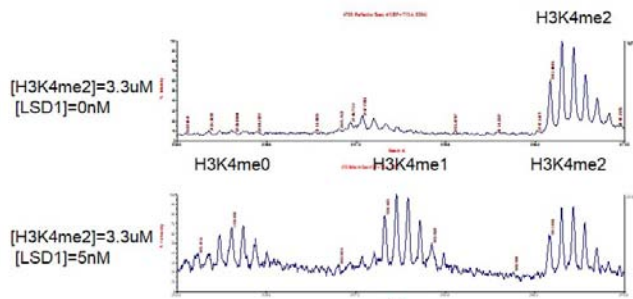
Recombinant LSD1 / KDM1A protein gel.

LSD1 / KDM1A protein was run on a 8% SDS-PAGE gel and stained with Coomassie blue.



Recombinant LSD1 / KDM1A activity assay.

3.3 μ M H3K4me2 (1-27aa) peptide was incubated with KDM1A / LSD1 in reaction buffer for 1 hour at room temperature. KDM1A / LSD1 enzyme was used in a HTRF assay to determine enzyme linearity. Demethylated peptide (H3K4me0) was measured using H3K4me0-specific antibody.



Recombinant LSD1 / KDM1A activity assay.

3.3 μ M H3K4me2 peptide was incubated with 5 nM LSD1 in reaction buffer for 1 hours at room temperature. The reaction product was detected by MALDI-TOF. Single 3.3 μ M H3K4me2 peptide was used as negative control.

Catalytic Ability: >600 turnovers / enzyme molecule.