LSD1 Protein, Human (sf9, His-GST)

Cat. No.:	HY-P75551
Synonyms:	Lysine-specific histone demethylase 1A; KDM1A; AOF2; KDM1; KIAA0601; LSD1
Species:	Human
Source:	Sf9 insect cells
Accession:	O60341-1 (S172-M852)
Gene ID:	23028
Molecular Weight:	Approximately 93 kDa

PROPERTIES

AA Sequence

S G V E G A A F Q S R L P H D R M T S Q E A A C F P D I I S G P Q Q T Q K V F L
F I R N R T L Q L W L D N P K I Q L T F E A T L Q Q L E A P Y N S D T V L V H R
V H S Y L E R H G L I N F G I Y K R I K P L P T K K T G K V I I I G S G V S G L
A A A R Q L Q S F G M D V T L L E A R D R V G G R V A T F R K G N Y V A D L G A
M V V T G L G G N P M A V V S K Q V N M E L A K I K Q K C P L Y E A N G Q A V P
K E K D E M V E Q E F N R L L E A T S Y L S H Q L D F N V L N N K P V S L G Q A
L E V V I Q L Q E K H V K D E Q I E H W K K I V K T Q E E L K E L L N K M V N L
K E K I K E L H Q Q Y K E A S E V K P P R D I T A E F L V K S K H R D L T A L C
K E Y D E L A E T Q G K L E E K L Q E L E A N P P S D V Y L S S R D R Q I L D W
H F A N L E F A N A T P L S T L S L K H W D Q D D D F E F T G S H L T V R N G Y
S C V P V A L A E G L D I K L N T A V R Q V R Y T A S G C E V I A V N T R S T S
Q T F I Y K C D A V L C T L P L G V L K Q Q P P A V Q F V P P L P E W K T S A V
Q R M G F G N L N K V V L C F D R V F W D P S V N L F G H V G S T T A S R G E L
F L F W N L Y K A P I L L A L V A G E A A G I M E N I S D D V I V G R C L A I L
K G I F G S S A V P Q P K E T V V S R W R A D P W A R G S Y S Y V A A G S S G N
D Y D L M A Q P I T P G P S I P G A P Q P I P R L F F A G E H T I R N Y P A T V
H G A L L S G L R E A G R I A D Q F L G A M Y T L P R Q A T P G V P A Q Q S P S
M

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of 20 mM Tris, 500 mM NaCl, 2 mM DTT, pH 8.0, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is

	recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	LSD1, a histone demethylase, exhibits the unique capability to demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, functioning as a versatile coactivator or corepressor depending on the cellular context. Acting through FAD-mediated oxidation and subsequent imine hydrolysis, LSD1 can demethylate mono- and di-methylated H3K4me, thus contributing to the regulation of epigenetic transcriptional activation. In the absence of RCOR1/CoREST, LSD1 alone is unable to demethylate H3K4me on nucleosomes. Additionally, LSD1 serves as a coactivator for androgen receptor (AR)-dependent transcription, participating in the demethylation of H3K9me, a marker associated with epigenetic transcriptional repression. Moreover, LSD1 plays a pivotal role in suppressing neuronal genes and orchestrates the repression of E-cadherin/CDH1, CDN7, and KRT8 through its involvement in the RCOR/GFI/KDM1A/HDAC complex. Beyond histone demethylation, LSD1's diverse interactions extend to demethylating p53/TP53, stabilizing DNMT1, and modifying SOX2. The intricate regulatory role of LSD1 spans embryogenesis, gastrulation, and multilineage blood cell development, emphasizing its significance in shaping the epigenetic landscape and influencing various cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA