Data Sheet (Cat.No.TMPY-03056)

TargetMol

LSD1 Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	KDM1A;BHC110;LSD1;KDM1;AOF2;lysine (K)-specific demethylase 1A
Protein Construction:	A DNA sequence encoding the human KDM1 (O60341-1) (Ser172-Met852) was fused with the N-terminal poly histidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	O60341-1
Molecular Weight:	103.3 kDa (predicted); 93 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 2 mM DTT, pH 8.0, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

LSD1 belongs to the flavin monoamine oxidase family. It contains 1 SWIRM domain and is a component of an RCOR/GFI/LSD1/HDAC complex. LSD1 interacts directly with GFI1 and GFI1B. LSD1 specifically removes histone H3K4me2 to H3K4me1 or H3K4me0 through a FAD-dependent oxidative reaction. When forming a complex with an androgen receptor (and possibly other nuclear hormone receptors), LSD1 changes its substrates to H3K9me2. Thus LSD1 is considered to act as a coactivator or a corepressor. It may play a role in the repression of neuronal genes.

Alone, LSD1 is unable to demethylate H3 'Lys-4' on nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity.

Reference

Kusaba M,et al.(2007) Rice NON-YELLOW COLORING1 is involved in light-harvesting complex II and grana degradation during leaf senescence. Plant Cell. 19(4):1362-75.
Pazour GJ,et al.(2005) Proteomic analysis of a eukaryotic cilium. J Cell Biol. 170(1):103-13.
Merchant SS,et al.(2007) The Chlamydomonas genome reveals the evolution of key animal and plant functions. Science. 318(5848):245-50.

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