LSD1 Blocking Peptide

PRODUCT OVERVIEW

Product Name	LSD1 (KDM1), Blocking Peptide
Full Product Name	LSD1 Peptide
Product Gene Name	KDM1 blocking peptide
Product Synonym Names	AOF2; KDM1; LSD1; BHC110; AOF2; KIAA0601; Lysine-specific histone demethylase 1A; BRAF35-HDAC complex protein BHC110; lysine (K)-specific demethylase 1
Form/Format	Liquid
Concentration	200 ug/mL (lot specific)
Preparation and Storage	Store LSD1 peptide at -20 degree C, stable for one year.
Antibody/Peptide Pairs	LSD1 peptide (MBS152798) is used for blocking the activity of LSD1 antibody (MBS150364)
Molecular Weight	95,155 Da
OMIM	609132
Species	Human
Buffer	PBS pH 7.2 (10 mM NaH2PO4, 10 mM Na2HPO4, 130 mM NaCl) containing 0.1% bovine serum albumin and 0.02% sodium azide
Location	17 amino acids near the amino terminus of human LSD1.
Applications Tested/Suitable for KDM1 blocking peptide	Blocking (BL)
Application Notes for KDM1 blocking peptide	LSD1 peptide is used for blocking the activity of LSD1 antibody.
Related Product Information for KDM1 blocking peptide	MBS152798 is a blocking peptide targeting KDM1. Also known as LSD1 Peptide.
Other Notes	Small volumes of KDM1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for KDM1. It may not necessarily be applicable to this product.

NCBI GI #	58761544
NCBI GeneID	23028
NCBI Accession #	NP_001009999
UniProt Primary Accession #	O60341
UniProt Secondary Accession #	Q5TH94; Q5TH95; Q86VT7; Q8IXK4; Q8NDP6; Q8TAZ3; Q96AW4; A8MWP9
UniProt Related Accession #	O60341
GenBank Nucleotide #	NM_001009999.2
NCBI Official Full Name	lysine-specific histone demethylase 1A isoform a

NCBI Official Synonym Full Names	lysine (K)-specific demethylase 1A
NCBI Official Symbol	KDM1A
NCBI Official Synonym Symbols	AOF2; KDM1; LSD1; BHC110
UniProt Protein Name	Lysine-specific histone demethylase 1A
UniProt Synonym Protein Names	BRAF35-HDAC complex protein BHC110; Flavin-containing amine oxidase domain-containing protein 2
Protein Family	Lysine-specific histone demethylase
UniProt Gene Name	KDM1A
UniProt Synonym Gene Names	AOF2; KDM1; KIAA0601; LSD1
UniProt Entry Name	KDM1A_HUMAN
NCBI Protein Information	lysine-specific histone demethylase 1A; lysine (K)-specific demethylase 1; BRAF35-HDAC complex protein BHC110; amine oxidase (flavin containing) domain 2; FAD-binding protein BRAF35-HDAC complex, 110 kDa subunit; flavin-containing amine oxidase domain-containing protein 2
NCBI Summary for KDM1	This gene encodes a nuclear protein containing a SWIRM domain, a FAD-binding motif, and an amine oxidase domain. This protein is a component of several histone deacetylase complexes, though it silences genes by functioning as a histone demethylase. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Apr 2009]

UniProt Comments for KDM1	LSD1: Histone demethylase that demethylates both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context. Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2) H3K4me. May play a role in the repression of neuronal genes. Alone, it is unable to demethylate H3K4me on nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity. Also acts as a coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in ANDR-containing complexes, which mediates phosphorylation of 'Thr- 6' of histone H3 (H3T6ph), a specific tag that prevents demethylation H3K4me, prevents H3K4me demethylase activity of KDM1A. Demethylates di-methylated 'Lys-370' of p53/TP53 which prevents interaction of p53/TP53 with TP53BP1 and represses p53/TP53-mediated transcriptional activation. Demethylates and stabilizes the DNA methylase DNMT1. Required for gastrulation during embryogenesis. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development. Component of a RCOR/GFI/KDM1A/HDAC complex. Interacts directly with GFI1 and GFI1B. Component of a BHC histone deacetylase complex that contains HDAC1, HDAC2, HMG20B, KDM1A, RCOR1 and PHF21A. The BHC complex may also contain ZMYM2, ZNF217, ZMYM3, GSE1 and GTF2I. In the complex, RCOR1/CoREST strongly enhances the demethylase activity and protects it from the proteasome while PHF21A/BHC80 inhibits the demethylase activity. Interacts with the androgen receptor (AR). Interacts with ASXL1. Ubiquitously expressed. Belongs to the flavin monoamine oxidase family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 1.-.-.-; Nuclear receptor co-regulator; Demethylase; Transcription factor; Oxidoreductase Chromosomal Location of Human Ortholog: 1p36.12 Cellular Component: nucleoplasm; transcription factor complex; nuclear chromatin; nucleus Molecular Function: FAD binding; p53 binding; oxidoreductase activity; histone demethylase activity (H3-K9 specific); transcription factor binding; histone demethylase activity (H3-K4 specific); MRF binding; protein binding; enzyme binding; histone demethylase activity; androgen receptor binding; ligand-dependent nuclear receptor transcription coactivator activity; chromatin binding; transcription factor activity; demethylase activity Biological Process: negative regulation of histone H3-K9 methylation; establishment and/or maintenance of chromatin architecture; transcription, DNA-dependent; granulocyte differentiation; in utero embryonic development; negative regulation of transcription factor activity; positive regulation of erythrocyte differentiation; muscle cell development; negative regulation of histone H3-K4 methylation; negative regulation of transcription from RNA polymerase II promoter; negative regulation of DNA binding; protein amino acid demethylation; regulation of transcription from RNA polymerase II promoter; negative regulation of DNA damage response, signal transduction by p53 class mediator; cell proliferation; histone H3-K9 demethylation; pituitary gland development; positive regulation of hormone biosynthetic process; positive regulation of transcription factor activity; positive regulation of transcription from RNA polymerase II promoter; positive regulation of megakaryocyte differentiation; negative regulation of transcription, DNA-dependent; negative regulation of protein binding; blood coagulation
Research Articles on KDM1	**1.** Snail cooperates with LSD1 to repress PTEN in a PARP1-dependent manner.
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