

Product Information

Anti-LSD1 (AOF2) (N-terminal)

produced in rabbit, IgG fraction of antiserum

Catalog Number **L4793**

Product Description

Anti-LSD1 (AOF2) (N-terminal) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 123-139 of human LSD1 (AOF2) (isoform b), conjugated to KLH via a C-terminal added cysteine residue. The immunizing sequence is present also in isoform a. This sequence is conserved in human, rat, and mouse. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-LSD1 (AOF2) (N-terminal) specifically recognizes human LSD1 (AOF2). Applications include immunoblotting (2 bands, ~110-115 kDa) and immunoprecipitation. Staining of the LSD1 (AOF2) band in immunoblotting is specifically inhibited by the immunizing peptide.

Covalent modification of the amino-terminal and carboxy-terminal tails of histones, such as phosphorylation, acetylation, and methylation, plays a critical role in the regulation of chromatin structure and function. The level of histone acetylation and phosphorylation in the cell is regulated by pairs of opposing enzymes such as acetylase/deacetylase and kinase/phosphatase, respectively. Methylation of histones occurs on both arginine and lysine residues, and is also regulated in a dynamic manner. LSD1 (lysine specific demethylase 1) also known as AOF2 (Amine Oxidase flavin containing domain 2) is a lysine specific demethylase.¹ It is a nuclear protein containing a SWIRM domain, a FAD-binding motif and an amine oxidase domain.¹ This protein is a component of several histone deacetylase complexes that function through modifying chromatin structure to repress transcription.²⁻⁵ In these complexes LSD1 (AOF2) is referred to by additional names including KIAA0601 protein, BHC110 (BRAFF-HDAC complex protein 110) and NPAO (Nuclear Polyamine Oxidase). Methylation of lysines can lead either to gene silencing or activation depending on the specific lysine residue that is methylated.⁶ Thus, LSD1 (AOF2) action can signal

either activation or repression of transcription. For example, demethylation of histone H3 Lys⁴ by LSD1 (AOF2) leads to transcriptional repression of target genes, while demethylation of histone H3 at Lys⁹ leads to de-repression of androgen receptor target genes.^{1, 7} The activity of LSD1 (AOF2) is regulated by its associated factors. CoREST, a transcriptional corepressor, promotes demethylation by enhancing the association of LSD1 (AOF2) with the nucleosomes and also protects LSD1 (AOF2) from proteasomal degradation.^{8, 9}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:1,000- 1:2,000 is recommended using MCF7 cell lysates.

Immunoprecipitation: 2-5 µL of the antibody can immunoprecipitate LSD1 (AOF2) from MCF7 cell lysates.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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NV,YK,KAA,PHC 08/06-1

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