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ProductInformation

Monoclonal Anti-LSD1 (AOF2)
Clone LSD1-12
produced in mouse, purified immunoglobulin

Catalog Number **L7293**

Product Description

Monoclonal Anti-LSD1 (AOF2) (mouse IgG1 isotype) is derived from the hybridoma LSD1-12 produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 832-847 of human LSD1/BHC110 (Gene ID: 23028). This sequence is identical in bovine, rat, mouse, and frog. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-LSD1 (AOF2) recognizes human and mouse LSD1. The antibody may be used in ELISA, immunoblotting (~110 kDa), immunoprecipitation, and immunocytochemistry.

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. Pairs of opposing enzymes, such as acetylase/deacetylase and kinase/phosphatase, respectively, regulate the level of histone acetylation and phosphorylation in the cell. 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 is referred to by additional names including KIAA0601 protein, BHC110 (BRAF-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 action can signal either activation or repression of transcription. For example, demethylation of histone H3 Lys^4 by LSD1 leads to transcriptional repression of target genes, while demethylation of histone H3 at Lys^9 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 with the nucleosomes and also protects LSD1 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 as a preservative.

Antibody concentration: ~2 mg/mL

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 concentration of 0.5-1 µg/mL is recommended using MCF7 total cell extract.

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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6. Martin, C., and Zharg, Y., *Nat. Rev. Mol. Cell Biol.*, **6**, 838-849 (2005).
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