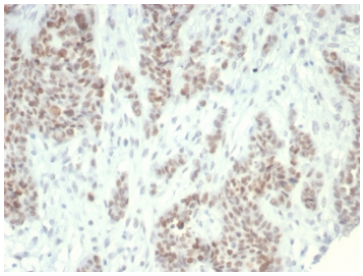
LSD1 Antibody / Epigenetic Regulation Marker [clone PCRP-KDM1A-1A10] (V4694)

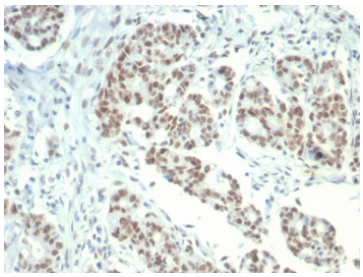
Catalog No.	Formulation	Size
V4694-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4694-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4694SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

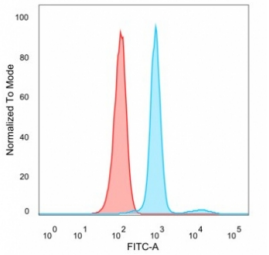
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a
Clone Name	PCRP-KDM1A-1A10
Purity	Protein A/G affinity
UniProt	O60341
Localization	Nucleus
Applications	Flow Cytometry : 1-2ug/million cells Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This LSD1 Antibody / Epigenetic Regulation Marker is available for research use only.



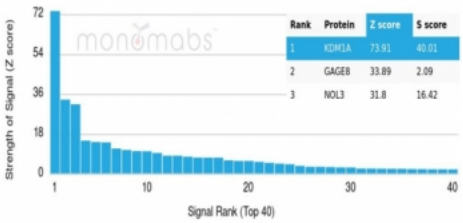
LSD1 Antibody Ovarian Carcinoma IHC. Immunohistochemistry analysis of FFPE human ovarian carcinoma tissue stained with LSD1 Antibody / Epigenetic Regulation Marker (clone PCRP-KDM1A-1A10). Tumor cells demonstrate prominent nuclear HRP-DAB brown staining consistent with the chromatin-associated localization expected for Lysine-specific demethylase 1 / KDM1A, an epigenetic regulator involved in transcriptional repression and histone demethylation pathways. Sections underwent HIER using 10mM Tris with 1mM EDTA buffer, pH 9, prior to antibody incubation and chromogenic detection.



LSD1 Antibody Colon Carcinoma IHC. Immunohistochemistry analysis of FFPE human colon carcinoma tissue stained with LSD1 Antibody / Epigenetic Regulation Marker (clone PCRP-KDM1A-1A10). Strong nuclear HRP-DAB brown staining is observed in colon carcinoma cells, consistent with the expected nuclear localization of LSD1/KDM1A within chromatin remodeling and epigenetic transcriptional regulatory complexes. Tissue sections underwent HIER using 10mM Tris with 1mM EDTA buffer, pH 9, followed by staining with clone PCRP-KDM1A-1A10.



LSD1 Antibody HeLa FACS. Flow cytometry analysis of PFA-fixed human HeLa cells stained with LSD1 Antibody / Epigenetic Regulation Marker (clone PCRP-KDM1A-1A10) followed by goat anti-mouse IgG-CF488 (blue histogram). Unstained cells are shown in red. The distinct fluorescence shift supports detection of endogenous Lysine-specific demethylase 1 / KDM1A expression in HeLa cells, consistent with the broad cellular distribution reported for this chromatin-associated epigenetic regulatory protein.



LSD1 Antibody HuProt Microarray Specificity Validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using LSD1 Antibody / Epigenetic Regulation Marker clone PCRP-KDM1A-1A10 demonstrates highly selective recognition of Lysine-specific demethylase 1 / KDM1A. The intended KDM1A target ranks first among all proteins analyzed on the array, with strong separation from secondary signals, supporting the specificity profile of this mouse monoclonal antibody for epigenetic regulation and chromatin remodeling research applications. Z-score represents signal intensity above background in standard deviation units, while S-score reflects the relative specificity of antibody binding compared with additional proteins present on the HuProt(TM) platform.

Description

Lysine-specific demethylase 1 (KDM1A), commonly known as LSD1, is an epigenetic regulatory protein involved in chromatin remodeling, transcriptional repression, and histone modification pathways. LSD1 Antibody / Epigenetic Regulation Marker is suitable for studies involving chromatin-associated regulatory proteins, transcriptional control mechanisms, stem cell signaling, and cancer epigenetics. LSD1 belongs to the flavin adenine dinucleotide-dependent amine oxidase family and functions as a histone demethylase capable of modulating transcription-associated chromatin states through removal of methyl groups from histone substrates.

LSD1 antibody, also referred to as KDM1A antibody, Lysine-specific demethylase 1 antibody, Histone lysine demethylase antibody, and BHC110 antibody in the literature, recognizes a nuclear regulatory protein that participates in transcriptional repression and activation complexes associated with chromatin remodeling pathways. LSD1 was one of the first histone demethylases identified and remains a central regulator of epigenetic signaling networks controlling cellular differentiation, stem cell maintenance, and adaptive transcriptional responses. The protein functions within multiprotein chromatin remodeling complexes including CoREST-associated transcriptional repression assemblies that regulate accessibility of DNA-associated regulatory regions.

Epigenetic regulatory proteins such as LSD1 are critical for coordinated control of lineage specification, developmental signaling, and cellular identity. LSD1 contributes to regulation of histone H3 lysine methylation states associated with transcriptional activation and repression pathways. Through modulation of chromatin architecture and transcription factor accessibility, LSD1 influences pathways controlling proliferation, differentiation, epithelial-mesenchymal transition, and cellular plasticity. The protein is predominantly localized within the nucleus, consistent with its role in chromatin-associated transcriptional regulation.

Dysregulated LSD1 expression has been linked to numerous malignancies including acute myeloid leukemia, prostate

cancer, breast cancer, neuroblastoma, and small cell lung cancer. Because epigenetic remodeling pathways influence tumor progression, stemness, and therapeutic resistance, LSD1 has emerged as a major target in cancer epigenetics and drug development research. LSD1 inhibitors are under active investigation for treatment strategies involving transcriptional reprogramming and differentiation-associated therapies.

Immunohistochemistry and immunofluorescence analyses support the expected nuclear localization pattern of LSD1/KDM1A in human cells and tissues, consistent with the intracellular distribution expected for a chromatin-associated epigenetic regulator. HuProt(TM) protein microarray specificity validation further supports selective recognition of LSD1 among more than 19,000 full-length human proteins. The combination of IHC, IF, and protein microarray validation supports use of this antibody for studies involving epigenetic signaling, chromatin remodeling, transcriptional repression, and cancer-associated regulatory pathways.

An antibody targeting LSD1 can therefore support investigations involving histone demethylation pathways, epigenetic transcriptional regulation, chromatin remodeling complexes, stem cell-associated signaling networks, and cancer-related transcriptional reprogramming mechanisms.

LSD1/KDM1A functions as a chromatin-associated histone demethylase involved in epigenetic transcriptional regulation; explore related chromatin remodeling and histone modification targets on our Epigenetics Antibodies landing page.

Application Notes

Optimal dilution of the LSD1 Antibody / Epigenetic Regulation Marker should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 152-279) from the human protein was used as the immunogen for the LSD1 Antibody.

Storage

Aliquot the LSD1 Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

LSD1 antibody, KDM1A antibody, Lysine-specific demethylase 1 antibody, Histone lysine demethylase antibody, BHC110 antibody