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# Anti-KDM1A Antibody

Catalog # AP95905

## Product Information

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|---|---|
| **Application** | WB, IHC, FC, IF/IC |
| **Primary Accession** | O60341 |
| **Reactivity** | Human, Mk |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Calculated MW** | 92903 |

## Additional Information

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|---|---|
| **Gene ID** | 23028 |
| **Other Names** | AOF2; KDM1; KIAA0601; LSD1; Lysine-specifIC, histone demethylase 1A; BRAF35-HDAC complex protein BHC110; Flavin-containing amine oxidase domain-containing protein 2 |
| **Target/Specificity** | Recombinant fusion protein of human KDM1A expressed in E. Coli |
| **Dilution** | WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200) IF/IC~~N/A |
| **Format** | Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

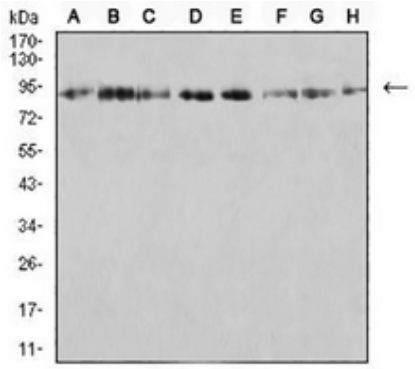
| | |
|---|---|
| **Name** | KDM1A ( HGNC:29079) |
| **Function** | Histone demethylase that can demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context (PubMed:15620353, PubMed:15811342, PubMed:16079794, PubMed:16079795, PubMed:16140033, PubMed:16223729, PubMed:27292636). Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed (PubMed:15620353, PubMed:15811342, PubMed:16079794, PubMed:21300290, PubMed:26214369). Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2) (PubMed:15620353, PubMed:20389281, PubMed:21300290, PubMed:23721412). 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 (PubMed:16079794, PubMed:16140033, PubMed:16885027, PubMed:21300290, PubMed:23721412). Also acts as a coactivator of androgen receptor |

(AR)-dependent transcription, by being recruited to AR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in AR-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 (PubMed:16079795). 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 (PubMed:29691401). Demethylates methylated 'Lys-42' and methylated 'Lys-117' of SOX2 (PubMed:29358331). 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 (PubMed:16079794, PubMed:16140033). Facilitates epithelial-to-mesenchymal transition by acting as an effector of SNAI1- mediated transcription repression of epithelial markers E-cadherin/CDH1, CDN7 and KRT8 (PubMed:20562920, PubMed:27292636). Required for the maintenance of the silenced state of the SNAI1 target genes E-cadherin/CDH1 and CDN7 (PubMed:20389281). Required for the repression of GIPR expression (PubMed:34655521, PubMed:34906447).

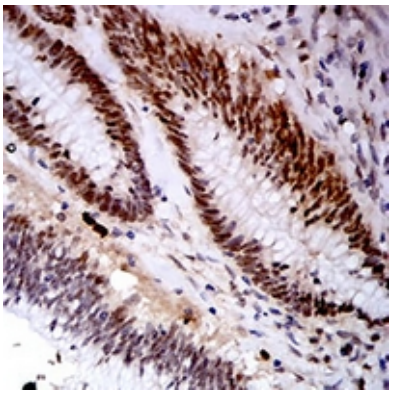
**Cellular Location** Nucleus. Chromosome. Note=Associates with chromatin

**Tissue Location** Ubiquitously expressed. [Isoform 4]: Expressed exclusively in brain tissues.

## Images

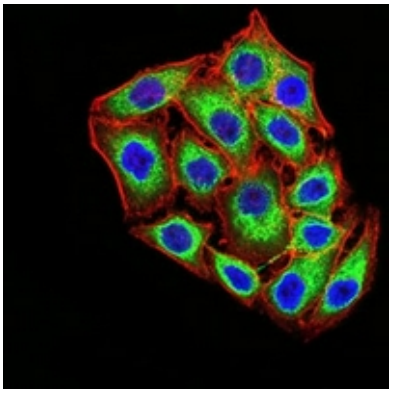



Western blot analysis of KDM1A expression in SKBr3 (A), K562 (B), SW480 (C), Jurkat (D), Hela (E), COS7 (F), T47D (G), HCT116 (H) whole cell lysates. (Predicted band size: 93 kD; Observed band size: 93 kD)

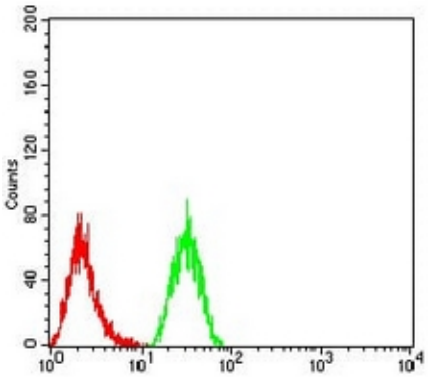


Immunohistochemical analysis of KDM1A staining in human colon cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of KDM1A staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and



incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).




Flow cytometric analysis of HeLa cells using Anti-KDM1A Antibody (green) and negative control (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.