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KDM4A Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1440a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	O75164
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5H1
Isotype	IgG1
Calculated MW	120662
Description	This gene is a member of the Jumonji domain 2 (JMJD2) family and encodes a protein containing a JmjN domain, a JmjC domain, a JD2H domain, two TUDOR domains, and two PHD-type zinc fingers. This nuclear protein functions as a trimethylation-specific demethylase, converting specific trimethylated histone residues to the dimethylated form, and as a transcriptional repressor.
Immunogen	Purified recombinant fragment of human KDM4A expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	9682
Other Names	Lysine-specific demethylase 4A, 1.14.11.-, JmjC domain-containing histone demethylation protein 3A, Jumonji domain-containing protein 2A, KDM4A, JHDM3A, JMJD2, JMJD2A, KIAA0677
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	KDM4A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KDM4A
Synonyms	JHDM3A, JMJD2, JMJD2A, KIAA0677

Function	Histone demethylase that specifically demethylates 'Lys-9' and 'Lys-36' residues of histone H3, thereby playing a central role in histone code (PubMed:16603238, PubMed:26741168, PubMed:21768309). Does not demethylate histone H3 'Lys-4', H3 'Lys-27' nor H4 'Lys-20' (PubMed:16603238, PubMed:26741168, PubMed:21768309). Demethylates trimethylated H3 'Lys-9' and H3 'Lys-36' residue, while it has no activity on mono- and dimethylated residues (PubMed:16603238, PubMed:26741168, PubMed:21768309). Demethylation of Lys residue generates formaldehyde and succinate (PubMed:16603238). Also able to demethylate histone H1-4 methylated at 'Lys-26' (H1.4K26me1, H1.4K26me2 and H1.4K26me3) (PubMed:19144645, PubMed:30156264). Participates in transcriptional repression of ASCL2 and E2F-responsive promoters via the recruitment of histone deacetylases and NCOR1, respectively (PubMed:16024779).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00537, ECO:0000269|PubMed:15927959, ECO:0000269|PubMed:16024779}
Tissue Location	Ubiquitous..

References

1. Genome Res. 2004 Sep;14(9):1711-8. 2. Nat Methods. 2005 Aug;2(8):591-8. 3. Cell. 2006 May 19;125(4):691-702.

Images

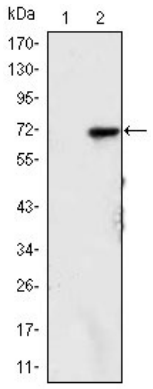


Figure 1: Western blot analysis using KDM4A mAb against HEK293 (1) and KDM4A(AA: 500-705)-hIgGFc transfected HEK293 (2) cell lysate.

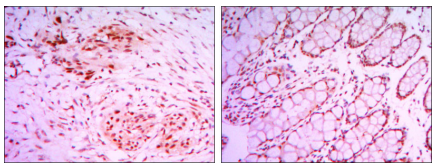


Figure 2: Immunohistochemical analysis of paraffin-embedded colon cancer tissues (left) and human larynx cancer tissues (right) using KDM4A mouse mAb with DAB staining.

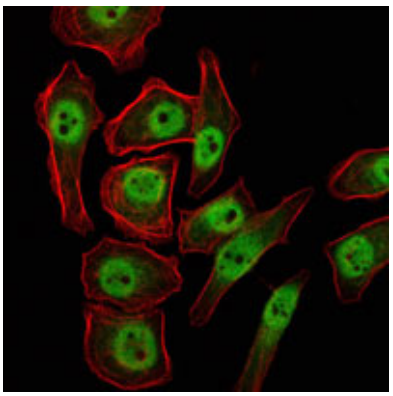


Figure 3: Immunofluorescence analysis of NTERA-2 cells using KDM4A mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

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