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JMJD2A Antibody

Catalog # ASC10969

Product Information

Application	WB, E, IHC-P
Primary Accession	O75164
Other Accession	CAH71021, 55665236
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	120662
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	JMJD2A antibody can be used for detection of JMJD2A by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

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
Target/Specificity	KDM4A;
Reconstitution & Storage	JMJD2A antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	JMJD2A 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:26741168, PubMed:21768309). Does not demethylate histone H3 'Lys-4', H3 'Lys-27' nor H4 'Lys-20'. Demethylates trimethylated H3 'Lys-9' and H3 'Lys-36' residue, while it has no activity on mono- and dimethylated residues. Demethylation of Lys residue generates formaldehyde and

	succinate. Participates in transcriptional repression of ASCL2 and E2F-responsive promoters via the recruitment of histone deacetylases and NCOR1, respectively.
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00537, ECO:0000269|PubMed:15927959, ECO:0000269|PubMed:16024779}
Tissue Location	Ubiquitous..

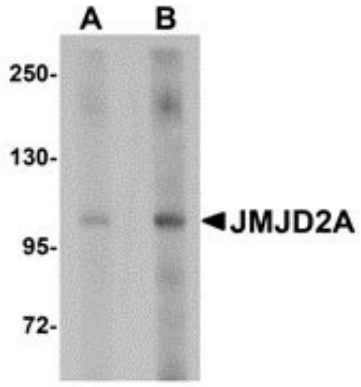
Background

JMJD2A Antibody: Members of the Jumonji domain 2 (JMJD2) family contain a JmjN domain, a JmjC domain, a JD2H domain, two TUDOR domains, and two PHD-type zinc fingers. The first member of this group, JMJD2A, is widely expressed in human tissues and cell lines and functions as a trimethylation-specific demethylase, converting specific trimethylated histone residues to the dimethylated form, and as a transcriptional repressor. JMJD2A can also form a complex with the androgen receptor (AR), a transcription factor that is pivotal for the development of prostate cancer. Overexpression of JMJD2A stimulates AR function and this stimulation is dependent on JMJD2A catalytic activity, suggesting that JMJD2A might be a critical protein with roles in cell proliferation and oncogenesis.

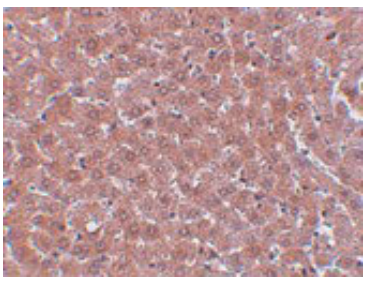
References

Gray SG, Iglesias AH, Lizcano F, et al. Functional characterization of JMJD2A, a histone deacetylase- and retinoblastoma-binding protein. J. Biol. Chem.2005; 31:28507-18.
Shin S and Janknecht R. Activation of androgen receptor by histone demethylases JMJD2A and JMJD2D. Biochem. Biophys. Res. Comm.2007; 359:742-6.

Images



Western blot analysis of JMJD2A in rat liver tissue lysate with JMJD2A antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of JMJD2A in rat liver tissue with JMJD2A antibody at 5 µg/mL.