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JMJD1A Antibody
Catalog # ASC10966

Specification

JMJD1A Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q9Y4C1
Other Accession	NP_060903, 55818
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**JMJD1A antibody can be used for detection of JMJD1A by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

JMJD1A Antibody - Additional Information

Gene ID **55818**

Target/Specificity
JMJD1A antibody was raised against a 16 amino acid synthetic peptide from near the amino terminus of human JMJD1A.

The immunogen is located within amino acids 50 - 100 of JMJD1A.

Reconstitution & Storage
JMJD1A 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
JMJD1A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

JMJD1A Antibody - Protein Information

Name KDM3A

Synonyms JHDM2A, JMJD1, JMJD1A, KIAA0742, TSGA

Function
Histone demethylase that specifically demethylates 'Lys-9' of histone H3, thereby playing a central role in histone code. Preferentially demethylates mono- and dimethylated H3 'Lys-9' residue, with a preference for dimethylated residue, while it has weak or no activity on trimethylated H3 'Lys-9'. Demethylation of Lys residue generates formaldehyde and succinate. Involved in hormone-dependent transcriptional activation, by participating in recruitment to androgen-receptor target genes, resulting in H3 'Lys-9' demethylation and transcriptional activation. Involved in spermatogenesis by regulating expression of target genes such as PRM1

and TNP1 which are required for packaging and condensation of sperm chromatin. Involved in obesity resistance through regulation of metabolic genes such as PPARA and UCP1.

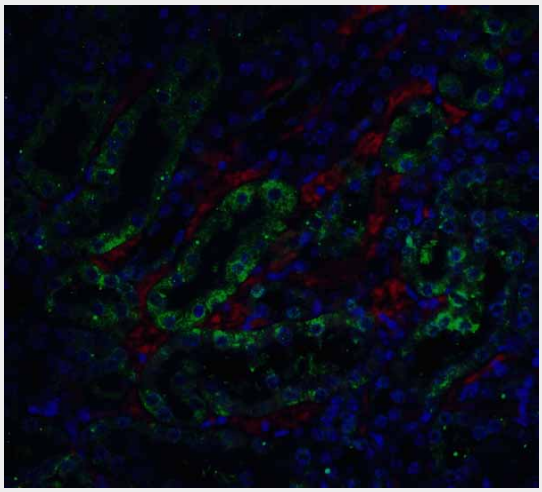
Cellular Location
Cytoplasm. Nucleus. Note=Nuclear in round spermatids. When spermatids start to elongate, localizes to the cytoplasm where it forms distinct foci which disappear in mature spermatozoa (By similarity).

JMJD1A Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

JMJD1A Antibody - Images



Immunofluorescence of ICAD in mouse kidney tissue with ICAD antibody at 5 µg/ml.

JMJD1A Antibody - Background

JMJD1A Antibody: The jumonji domain containing 1A protein (JMJD1A) was originally discovered as a testes specific gene, but has been found to be expressed in numerous tissues. JMJD1A is a histone demethylase and specifically demethylates mono- and dimethyl-H3K9. It has also been found to be a novel interaction partner with ER71, a transcription factor expressed in the testes of adult mice and during embryogenesis. JMJD1A is also a downstream gene of STAT3, a protein that has been found to be important in the maintenance of mouse embryonic stem (mES) cells, and decreased JMJD1A expression correlated with the differentiation of cultured mES cells following the removal of the cytokine LIF. These findings suggest that JMJD1A might be a critical signaling molecule underlying the maintenance of pluripotency in embryonic stem cells. At least two isoforms of JMJD1A are known to exist.

JMJD1A Antibody - References

Hoog C, Schalling M, Grunder-Brundell E, et al. Analysis of a murine male germ cell-specific transcript that encodes a putative zinc finger protein. Mol. Reprod. Dev.1991; 30:173-81.
Sar A, Ponjevic D, Nguyen M, et al. Identification and characterization of demethylase JMJD1A as a gene upregulated in the human cellular response to hypoxia. Cell Tissue Res.2009; 337:223-34.
Yamane K, Toumazou C, Tsukada Y, et al. JHDM2A, a JmjC-containing H3K9 demethylase, facilitates transcription activation by androgen receptor. Cell2006; 125:483-95.
Knebel J, De Haro L, and Janknecht R. Repression of transcription by TSGA/Jmjd1a, a novel interaction partner of the ETS protein ER71. J. Cell Biochem.2006; 99:319-29.