

Anti-JMJD1A KDM3A Antibody

Catalog Number: A03994-1

About KDM3A

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.

Overview

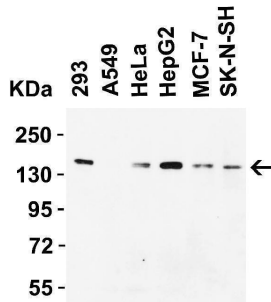
Product Name	Anti-JMJD1A KDM3A Antibody
Reactive Species	Human, Rat
Description	Boster Bio Anti-JMJD1A KDM3A Antibody (Catalog # A03994-1). Tested in ELISA, WB, IHC-P, IF applications. This antibody reacts with Human, Rat.
Application	ELISA, IF, IHC-P, WB
Clonality	Polyclonal
Formulation	JMJD1A Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	JMJD1A antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	Q9Y4C1

Technical Details

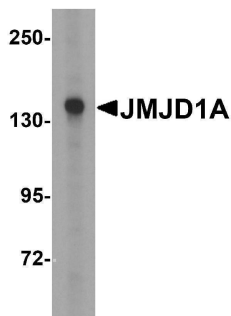
Immunogen	Anti-JMJD1A antibody was raised against a peptide corresponding to 16 amino acids near the amino terminus of human JMJD1A. The immunogen is located within amino acids 50-100 of JMJD1A.
Predicted Reactive Species	Chicken, Mouse
Cross Reactivity	This antibody will not cross-react with JMJD1B or JMJD1C.
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL

Purification	JMJD1A Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	WB: 1-2 ug/mL; IHC: 5 ug/mL; IF: 20 ug/mL. Antibody validated: Western Blot in human samples; Immunohistochemistry in rat samples; Immunofluorescence in rat samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

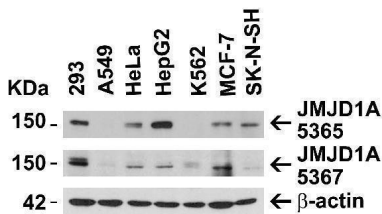
Anti-JMJD1A KDM3A Antibody (A03994-1) Images



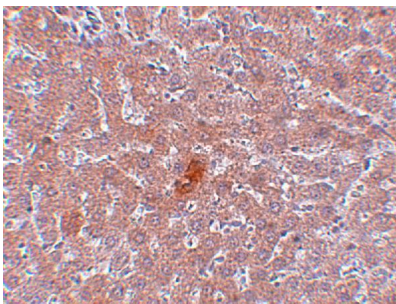
Western Blot Validation in Human Cell Lines Loading: 15 ug of lysates per lane. Antibodies: JMJD1A, A03994-1 (2 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



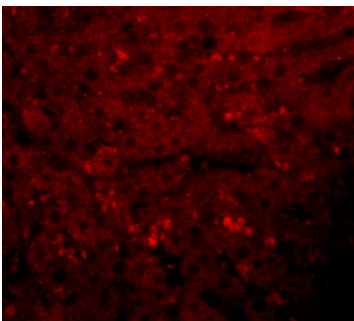
Western Blot Validation in Human HepG2 Cell Lysate Loading: 15 ug of lysates per lane. Antibodies: JMJD1A, A03994-1 (1 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Independent Antibody Validation (IAV) via Protein Expression Profile in Human Cell Lines Loading: 15 ug of lysates per lane. Antibodies: JMJD1A, A03994-1 (2 ug/mL), JMJD1A, 5367 (2 ug/mL), and beta-actin (1 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Immunohistochemistry Validation of JMJD1A in Rat Liver Tissue Immunohistochemical analysis of paraffin-embedded rat liver tissue using anti-JMJD1A antibody (A03994-1) at 5 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunofluorescence Validation of JMJD1A in Rat Liver Cells Immunofluorescent analysis of 4% paraformaldehyde-fixed rat liver cells labeling JMJD1A with A03994-1 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red).

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