



JMJD1A (I-14): sc-107654

BACKGROUND

JMJD1A (Jumonji domain containing 1A), also known as TSGA (testis-specific protein A), JMJD1, KDM3A, JHDM2A (JMJC domain-containing histone demethylation protein 2A) or JHDM2A, is a member of the JHDM2 histone demethylase family of proteins that is predominantly expressed in testis. Containing one JMJC domain and a C-terminal C₂HC₄ zinc finger, JMJD1A functions as a mono- and dimethylation-specific demethylase, binding iron and α -ketoglutarate as cofactors and demethylating Lysine 9 of Histone H3. This suggests that JMJD1A plays a central role in the histone code and participates in nuclear hormone receptor-based transcriptional regulation. In addition, JMJD1A plays an important role in the regulation of cell growth during development and in chromatin regulation. JMJD1A directly regulates the expression of TNP1 and Protamine 1 (proteins required for the proper packaging and condensation of sperm chromatin) and, therefore, plays an essential role in spermatogenesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: KDM3A (human) mapping to 2p11.2; Kdm3a (mouse) mapping to 6 C1.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SOURCE

JMJD1A (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of JMJD1A of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107654 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JMJD1A (I-14) is recommended for detection of JMJD1A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for JMJD1A siRNA (h): sc-94627, JMJD1A siRNA (m): sc-146322, JMJD1A shRNA Plasmid (h): sc-94627-SH, JMJD1A shRNA Plasmid (m): sc-146322-SH, JMJD1A shRNA (h) Lentiviral Particles: sc-94627-V and JMJD1A shRNA (m) Lentiviral Particles: sc-146322-V.

Molecular Weight of JMJD1A monomer: 150 kDa.

Molecular Weight of JMJD1A homodimer: 300 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.