SANTA CRUZ BIOTECHNOLOGY, INC.

JMJD2B (G-20): sc-54549

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The Power to Question

BACKGROUND

JMJD2B (JmjC domain-containing histone demethylation protein 3A) is a 1,064 amino acid protein encoded by the human gene JMJD2B. JMJD2B belongs to the JMJD2B histone demethylase family and contains one JmjC domain, one JmjN domain, two PHD-type zinc fingers and two Tudor domains. The two Tudor domains recognize and bind methylated histones and have an interdigitated structure; the unusual fold is required for its ability to bind methylated histone tails. JMJD2B is a histone demethylase that specifically demethylates Lys 9 residues of Histone H3, thereby playing a role in histone code. It does not demethylate Histone H3 Lys 4, H3 Lys 27, H3 Lys 36 or H4 Lys 20, however, and is only able to demethylate trimethylated H3 Lys 9 and has weaker activity than JMJD2A, JMJD2C and JMJD2D. JMJD2B demethylation of lysine residues will generate formaldehyde and succinate. JMJD2B is a ubiquitously expressed nuclear protein.

REFERENCES

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6. Katoh, Y. and Katoh, M. 2007. Comparative integromics on JMJD2A, JMJD2B and JMJD2C: preferential expression of JMJD2C in undifferentiated ES cells. Int. J. Mol. Med. 20: 269-273.

CHROMOSOMAL LOCATION

Genetic locus: KDM4B (human) mapping to 19p13.3; Kdm4b (mouse) mapping to 17 D.

SOURCE

JMJD2B (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of JMJD2B of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-54549 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JMJD2B (G-20) is recommended for detection of JMJD2B 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).

JMJD2B (G-20) is also recommended for detection of JMJD2B in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for JMJD2B siRNA (h): sc-62517, JMJD2B siRNA (m): sc-62518, JMJD2B shRNA Plasmid (h): sc-62517-SH, JMJD2B shRNA Plasmid (m): sc-62518-SH, JMJD2B shRNA (h) Lentiviral Particles: sc-62517-V and JMJD2B shRNA (m) Lentiviral Particles: sc-62518-V.

Molecular Weight of JMJD2B: 122 kDa.

Positive Controls: KNRK nuclear extract: sc-2141 or 3611-RF nuclear extract: sc-2143.

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.

SELECT PRODUCT CITATIONS

1. Bártová, E., Stixová, L., Galiová, G., Horáková, A., Legartová, S. and Kozubek, S. 2011. Mutant genetic background affects the functional rearrangement and kinetic properties of JMJD2b histone demethylase. J. Mol. Biol. 405: 679-695.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **JMJD2B (F-12): sc-374241**, our highly recommended monoclonal alternative to JMJD2B (G-20).