

JMJD1B (K-14): sc-131958

BACKGROUND

JMJD1B (jumonji domain containing 1B), also known as KDM3B, 5qNCA (5q nuclear co-activator) or C5orf7, is a member of the JHDM2 histone demethylase family of proteins. Expressed in a wide variety of tissues, JMJD1B localizes to the nucleus and contains one JMJC domain and a C-terminal zinc finger motif. JMJD1B functions as a histone demethylase and, using iron as a cofactor, demethylates Lysine 9 of Histone H3. This suggests that JMJD1B plays a central role in the histone code. The gene encoding human JMJD1B is located within the 5q region of the genome that is often deleted in myeloid leukemias and myelodysplasias. This implies that JMJD1B may function as a tumor suppressor of myeloid leukemia. Ectopic expression of JMJD1B exhibits growth suppressive activities, further supporting a role for JMJD1B in tumor suppression.

REFERENCES

1. Kikuno, R., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 197-205.
2. Lai, F., et al. 2000. cDNA cloning and genomic structure of three genes localized to human chromosome band 5q31 encoding potential nuclear proteins. Genomics 70: 123-130.
3. Hu, Z., et al. 2001. A novel nuclear protein, 5qNCA (LOC51780) is a candidate for the myeloid leukemia tumor suppressor gene on chromosome 5 band q31. Oncogene 20: 6946-6954.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609373. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Katoh, M. and Katoh, M. 2003. Identification and characterization of TRIP8 gene in silico. Int. J. Mol. Med. 12: 817-821.
6. Katoh, M. and Katoh, M. 2004. Identification and characterization of JMJD2 family genes in silico. Int. J. Oncol. 24: 1623-1628.
7. Knebel, J., et al. 2006. Repression of transcription by TSGA/JMJD1A, a novel interaction partner of the ETS protein ER71. J. Cell. Biochem. 99: 319-329.
8. Katoh, M. and Katoh, M. 2007. Comparative integromics on JMJD1C gene encoding histone demethylase: conserved POU5F1 binding site elucidating mechanism of JMJD1C expression in undifferentiated ES cells and diffuse-type gastric cancer. Int. J. Oncol. 31: 219-223.

CHROMOSOMAL LOCATION

Genetic locus: KDM3B (human) mapping to 5q31.2; Kdm3b (mouse) mapping to 18 B1.

SOURCE

JMJD1B (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of JMJD1B of human origin.

RESEARCH USE

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

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-131958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JMJD1B (K-14) is recommended for detection of JMJD1B isoforms 1, 2 and 3 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); non cross-reactive with other JMJD family members.

JMJD1B (K-14) is also recommended for detection of JMJD1B isoforms 1, 2 and 3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for JMJD1B siRNA (h): sc-91707, JMJD1B siRNA (m): sc-146323, JMJD1B shRNA Plasmid (h): sc-91707-SH, JMJD1B shRNA Plasmid (m): sc-146323-SH, JMJD1B shRNA (h) Lentiviral Particles: sc-91707-V and JMJD1B shRNA (m) Lentiviral Particles: sc-146323-V.

Molecular Weight of JMJD1B: 191 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.

STORAGE

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

PROTOCOLS

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