

JMJD5 (D-5): sc-377078



The Power to Question

BACKGROUND

JMJD5 (Jumonji domain containing 5) is a nuclear protein that is believed to function as a histone lysine demethylase. Belonging to the Jumonji C-domain-containing histone lysine demethylase (JHDM) family, JMJD5 contains one JMJC (Jumonji C) domain. The *C. elegans* homolog of JMJD5 has been identified as a protein that protects the genome against insertions and deletions. This suggests a potential role for mammalian JMJD5 as a tumor suppressor. Further supporting the role of JMJD5 as a tumor suppressor, the knockdown of JMJD5 expression in mouse fibroblasts can lead to an increased mutation rate and an increased tolerance to MNNG (a DNA methylating agent). This implies that JMJD5 may specifically participate in DNA mismatch repair.

REFERENCES

1. Toyoda, M., et al. 2000. JUMONJI is a nuclear protein that participates in the negative regulation of cell growth. *Biochem. Biophys. Res. Commun.* 274: 332-336.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611917. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Jung, J., et al. 2005. Roles of JUMONJI in mouse embryonic development. *Dev. Dyn.* 232: 21-32.
4. Takeuchi, T., et al. 2006. Roles of JUMONJI and JUMONJI family genes in chromatin regulation and development. *Dev. Dyn.* 235: 2449-2459.

CHROMOSOMAL LOCATION

Genetic locus: KDM8 (human) mapping to 16p12.1; Kdm8 (mouse) mapping to 7 F3.

SOURCE

JMJD5 (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 215-253 within an internal region of JMJD5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JMJD5 (D-5) is available conjugated to agarose (sc-377078 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377078 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377078 PE), fluorescein (sc-377078 FITC), Alexa Fluor® 488 (sc-377078 AF488), Alexa Fluor® 546 (sc-377078 AF546), Alexa Fluor® 594 (sc-377078 AF594) or Alexa Fluor® 647 (sc-377078 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377078 AF680) or Alexa Fluor® 790 (sc-377078 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377078 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

JMJD5 (D-5) is recommended for detection of JMJD5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

JMJD5 (D-5) is also recommended for detection of JMJD5 in additional species, including canine and porcine.

Suitable for use as control antibody for JMJD5 siRNA (h): sc-75359, JMJD5 siRNA (m): sc-75360, JMJD5 shRNA Plasmid (h): sc-75359-SH, JMJD5 shRNA Plasmid (m): sc-75360-SH, JMJD5 shRNA (h) Lentiviral Particles: sc-75359-V and JMJD5 shRNA (m) Lentiviral Particles: sc-75360-V.

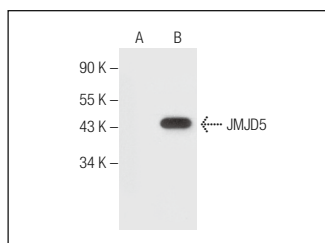
Molecular Weight of JMJD5: 47 kDa.

Positive Controls: JMJD5 (m): 293T Lysate: sc-127027.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



JMJD5 (D-5): sc-377078. Western blot analysis of JMJD5 expression in non-transfected: sc-117752 (A) and mouse JMJD5 transfected: sc-127027 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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