

JMJD7 (11K2): sc-134351

BACKGROUND

A crucial regulator of chromatin dynamics and DNA transcription is the covalent modification and methylation of histones. Generally, methylation of certain lysine residues on Histone H3 and Histone H4 can be associated with transcriptionally active or inactive chromatin. This regulation has profound effects on the expression of genes and is part of an epigenetic memory network that determines cell fate. JMJD7 (Jumonji domain-containing protein 7) is a member of a family of JMJC domain-containing histone demethylases that are directly involved in removing methyl residues from distinct and unique lysine residues. These actions are implicated in gene expression and the regulation of cell senescence. JMJC domain-containing histone demethylases are also likely involved in development via their ability to regulate gene expression. JMJD7 contains one JMJC domain and was originally thought to be an alternatively spliced isoform of PLA2G4B.

REFERENCES

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6. Pfau, R., Tzatsos, A., Kampranis, S.C., Serebrennikova, O.B., Bear, S.E. and Tschlis, P.N. 2008. Members of a family of JMJC domain-containing oncoproteins immortalize embryonic fibroblasts via a JMJC domain-dependent process. *Proc. Natl. Acad. Sci. USA* 105: 1907-1912.
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CHROMOSOMAL LOCATION

Genetic locus: JMJD7 (human) mapping to 15q14, JMJD7-PLA2G4B (human) mapping to 15q15.1.

SOURCE

JMJD7 (11K2) is a mouse monoclonal antibody raised against recombinant JMJD7-PLA2G4B protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

JMJD7 (11K2) is recommended for detection of JMJD7 and JMJD7-PLA2G4B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

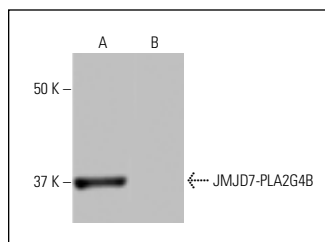
Molecular Weight of JMJD7: 36 kDa.

Positive Controls: human JMJD7-PLA2G4B transfected 293T whole cell lysate.

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).

DATA



JMJD7 (11K2): sc-134351. Western blot analysis of JMJD7-PLA2G4B expression in human JMJD7-PLA2G4B transfected (A) and non-transfected (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, Y., Arai, A., Kim, T., Kim, S., Park, N.H. and Kim, R.H. 2018. Histone demethylase JMJD7 negatively regulates differentiation of osteoclast. *Chin. J. Dent. Res.* 21: 113-118.

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.

PROTOCOLS

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