diagenode
A Hologic Company

TECHNICAL DATASHEET

JMJD2 antibody

Cat. No. C15410332

Type: Polyclonal **ChIP grade/ChIP-seq grade**
Source: Rabbit
Lot: A300-861A2
Size: 100 µl
Concentration: 100 µl

Specificity: Human, mouse
Purity: Affinity purified.
Storage: Store at 4°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.

Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Description: Polyclonal antibody raised in rabbit against human JMJD2a (Jumonji domain containing 2a), using a synthetic peptide containing a sequence from the C-terminal part of the protein.

Applications

Applications	Suggested dilution	References
ChIP*	5 µg per ChIP	Fig 1, 2
Western blotting	1:500	Fig 3
Immunoprecipitation	3 µg per IP	Fig 4

*Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-5 µg per IP.

Target description

JMJD2a (UniProtKB/Swiss-Prot entry O75164), belongs to the JMJD2 family of histone demethylases which play an important role in the establishment of the histone code. JMJD2a specifically demethylates the trimethylated K9 and K36 of histone H3, thereby converting these lysines to the dimethylated form. It has no activity towards H3K4, H3K27 and H4K20, or to the mono- and dimethylated H3K9 and H3K36. JMJD2a plays a role in the transcriptional repression of ASCL2 and E2F-responsive promoters via the recruitment of histone deacetylases and NCOR1, respectively.

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Results

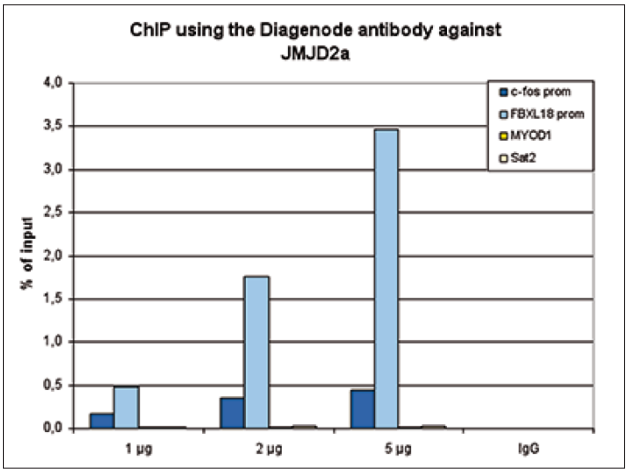

Figure 1. ChIP results obtained with the Diagenode antibody directed against JMJD2

ChIP assays were performed using K562 cells, the Diagenode antibody against JMJD2a (Cat. No. C15410332) and optimized PCR primer sets for qPCR. ChIP was performed with the "iDeal ChIP-seq" kit (Cat. No. C01010055), using sheared chromatin from 4 million cells. A titration consisting of 1, 2 and 5 µg of antibody per ChIP experiment was analyzed. IgG (2 µg/IP) was used as a negative IP control. Quantitative PCR was performed with optimized primers for the promoters of the c-fos and FBXL18 genes, used as positive controls, and for the MYOD1 gene and the Sat2 satellite repeat, used as negative controls. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

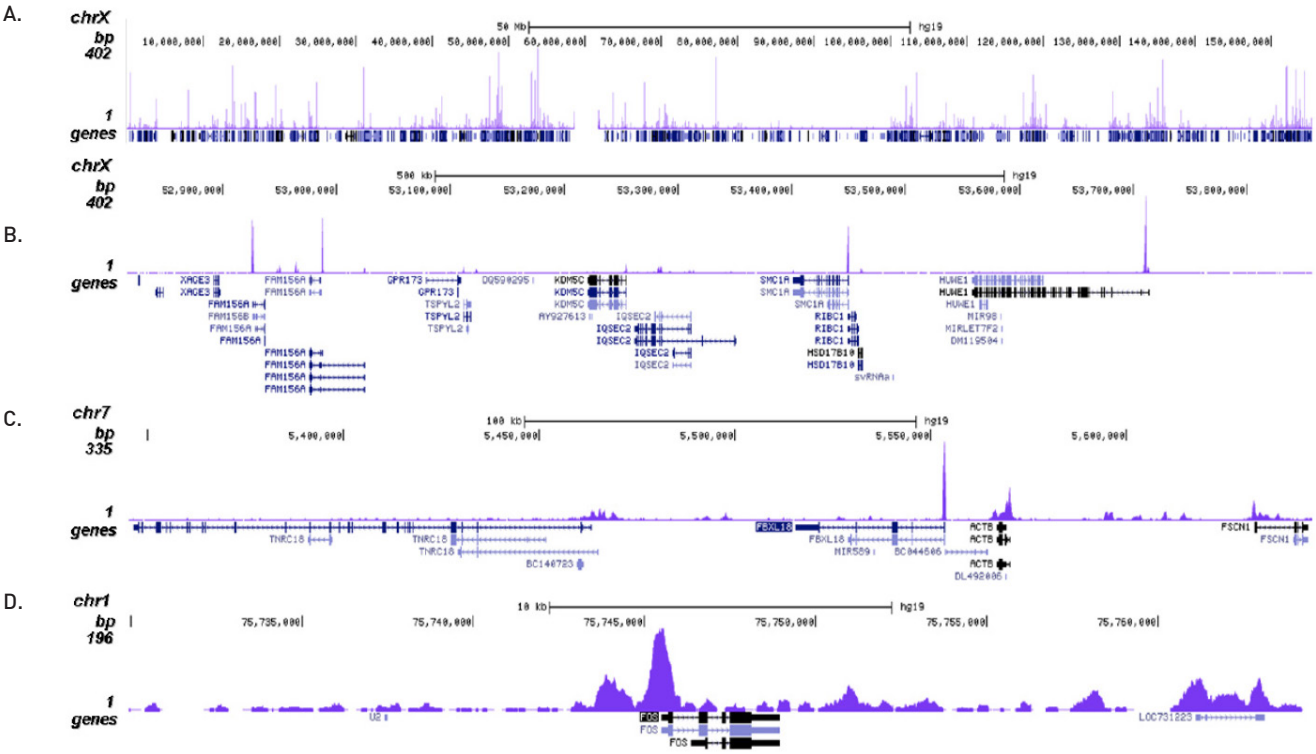

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against JMJD2a

ChIP assays were performed using K562 cells, the Diagenode antibody against JMJD2a (Cat. No. C15410332) and optimized PCR primer sets for qPCR. ChIP was performed with the "iDeal ChIP-seq" kit (Cat. No. C01010055), using sheared chromatin from 4 million cells. A titration consisting of 1, 2 and 5 µg of antibody per ChIP experiment was analyzed. IgG (2 µg/IP) was used as a negative IP control. Quantitative PCR was performed with optimized primers for the promoters of the c-fos and FBXL18 genes, used as positive controls, and for the MYOD1 gene and the Sat2 satellite repeat, used as negative controls. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

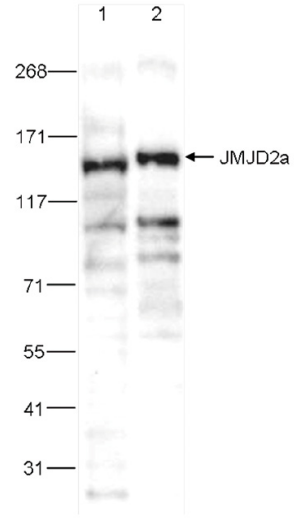

Figure 3. Western blot analysis using the Diagenode antibody directed against JMJD2a

Whole cell extracts from HeLa (lane 1) and mouse NIH3T3 cells (lane 2) were analysed by Western blot using the Diagenode antibody against JMJD2a (Cat. No. C15410332) diluted 1:500 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

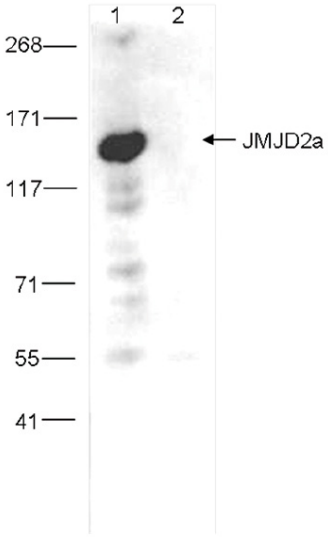

Figure 4. Immunoprecipitation analysis using the Diagenode antibody directed against JMJD2a

Immunoprecipitation was performed on whole cell extracts from HeLa cells using 3 µg of the Diagenode antibody against JMJD2a (Cat. No. C15410332, lane 1). An equal amount of rabbit IgG was used as a negative control (lane 2). The immunoprecipitated JMJD2a protein was detected by western blot with the JMJD2a antibody diluted 1:200.