diagenode
A Hologic Company

TECHNICAL DATASHEET

JARID1C polyclonal antibody

Other names: KDM5C, SMCX, MRX13, MRXJ, MRXSJ, MRXSCJ, XE169

Cat. No. C15410338
Type: Polyclonal **ChIP grade/ChIP-seq grade**
Source: Rabbit
Lot #: A301-034A2
Size: 100 µl
Concentration: 0.2 µg/µl

Specificity: Human, mouse: positive
Other species: not tested
Purity: Affinity purified polyclonal antibody in TBS containing 0.1% BSA and 0.09% azide.
Storage: Store at 4°C.
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Description: Polyclonal antibody raised in rabbit against human JARID1C (Jumonji, AT Rich Interactive Domain 1C), using a synthetic peptide containing a sequence from the central part of the protein[1].

Applications

Applications	Suggested dilution	References
ChIP*	5 µg per ChIP	Fig 1, 2
Western blotting	1:1,000	Fig 3
IP	6 µg per IP	Fig 4

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

Target description

JARID1C (UniProtKB/Swiss-Prot entry P41229) is a histone demethylase that specifically demethylates tri- and dimethylated Lys-4 of histone H3. It has no activity towards monomethylated H3K4, H3K9, H3K27, H3K36, H3K79 or H4K20. It is involved in transcriptional regulation and chromatin remodeling. JARID1C participates in transcriptional repression of neuronal genes by recruiting histone deacetylases and REST at neuron-restrictive silencer elements. Mutations in JARID1C have been associated with X-linked mental retardation

[1]Manufactured by Bethyl Laboratories, Inc., Texas, USA

Results

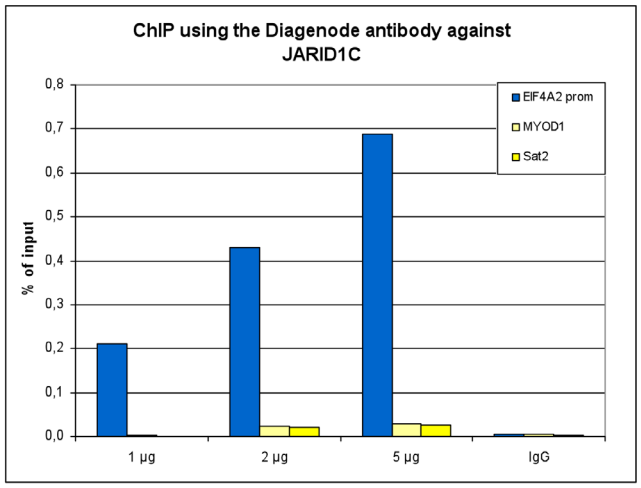

Figure 1. ChIP results obtained with the Diagenode antibody directed against JARID1C

ChIP assays were performed using K562 cells, the Diagenode antibody against JARID1C (Cat. No. C15410338) 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 primers for the promoter of the active EIF4A2 gene, used as positive control, and for the MYOD1 gene and 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).

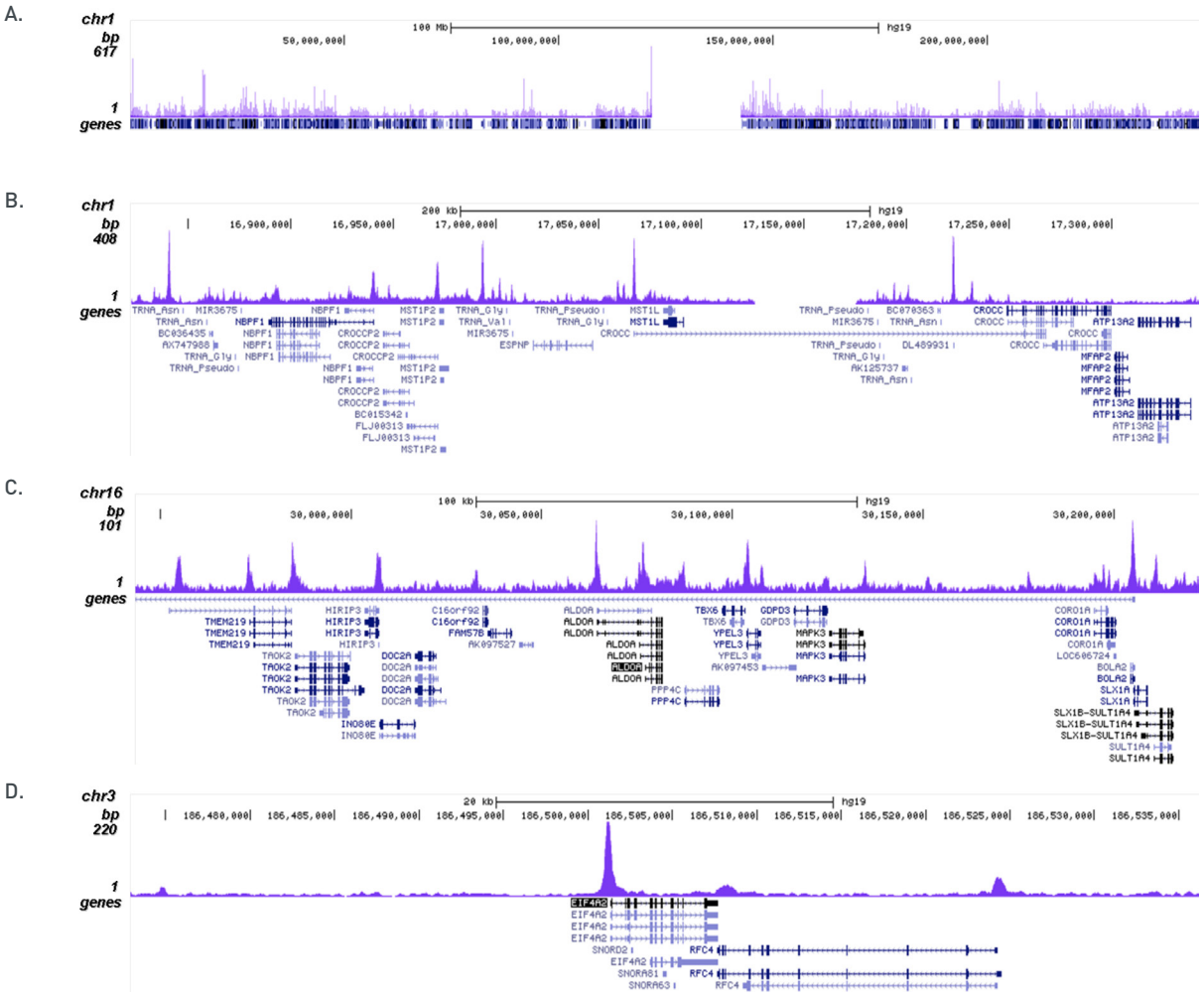

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against JARID1C

ChIP was performed on sheared chromatin from 4 million K562 cells using 5 µg of the Diagenode antibody against JARID1C (Cat. No. C15410338) as described above. The IP'd DNA was subsequently analysed on an Illumina HiSeq. Library preparation, cluster generation and sequencing were performed according to the manufacturer's instructions. The 50 bp tags were aligned to the human genome using the BWA algorithm. Figure 2 shows the enrichment along the complete sequence and a 600 Kb region of the human chromosome 1 (fig 2A and B), and in two genomic regions surrounding the ALDOA gene and the EIF4A2 positive control gene (fig 2C and D).

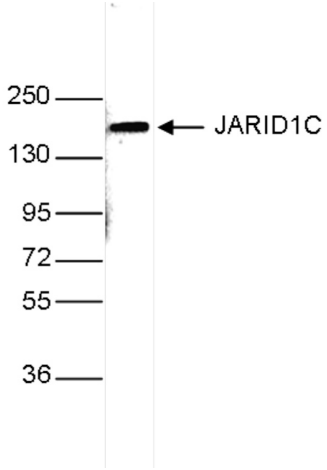

Figure 3. Western blot analysis using the Diagenode antibody directed against JARID1C

Whole cell extracts from HeLa cells were analysed by Western blot using the Diagenode antibody against JARID1C (Cat. No. C15410338) diluted 1:1,000 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.

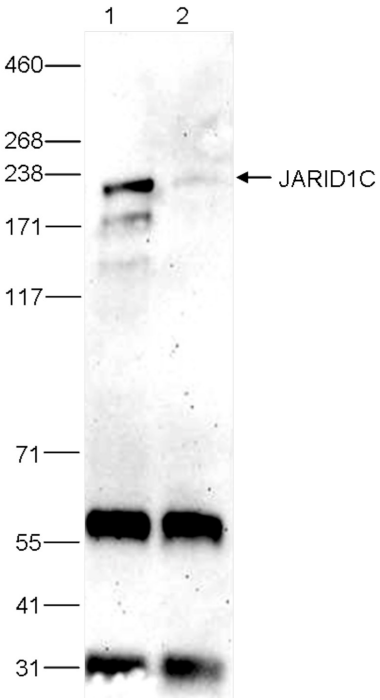

Figure 4. Immunoprecipitation using the Diagenode antibody directed against JARID1C

Immunoprecipitation was performed on whole cell extracts from HeLa cells using 6 µg of the Diagenode antibody against JARID1C (Cat. No. C15410338, lane 1). An equal amount of rabbit IgG was used as a negative control (lane 2). The immunoprecipitated JARID1C protein was detected by western blot with the JARID1C antibody diluted 1:200.

Diagenode sa. BELGIUM | **EUROPE**
LIEGE SCIENCE PARK
Rue du Bois Saint-Jean, 3
4102 Seraing - Belgium
Tel: +32 4 364 20 50
Fax: +32 4 364 20 51
orders@diagenode.com
info@diagenode.com

Diagenode Inc. USA | **NORTH AMERICA**
400 Morris Avenue, Suite 101
Denville, NJ 07834 - USA
Tel: +1 862 209-4680
Fax: +1 862 209-4681
orders.na@diagenode.com
info.na@diagenode.com

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