diagenode
Innovating Epigenetics Solutions

TECHNICAL DATASHEET

CHD1 polyclonal antibody

Cat. No. C15410334

Type: Polyclonal **ChIP grade, ChIP-seq grade**	Specificity: Human
Isotype: NA	Concentration: 0.2 µg/µl
Source: Rabbit	Purity: Affinity purified
Lot No.: A301-218A1	Storage: Store at 4°C
Size: 100 µl	Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Last Data Sheet Update: January 13, 2017

Description

Polyclonal antibody raised in rabbit against human CHD1 (Chromodomain Helicase DNA Binding Protein 1), using a synthetic peptide containing a sequence from the C-terminal part of the protein.

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

Applications

Applications	Suggested dilution	References
ChIP *	1 µg/ChIP	Fig 1, 2
Western Blotting	1:2,000	Fig 3
IP	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

CHD1 (UniProtKB/Swiss-Prot entry O14646) functions as substrate recognition component of the transcription regulatory histone acetylation (HAT) complex SAGA. It is required for the recognition of H3K4me3 by the FACT and PAF complexes as well as the U2 snRNP complex and regulates both polymerase II and polymerase I transcription. CHD1 further negatively regulates DNA replication and is required for maintaining open chromatin and pluripotency in embryonic stem cells.

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Validation data

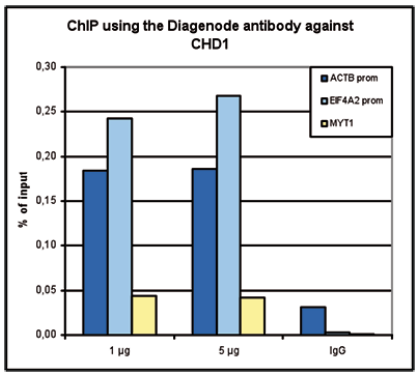

Figure 1. ChIP results obtained with the Diagenode antibody directed against CHD1

ChIP assays were performed using K562 cells, the Diagenode antibody against CHD1 (Cat. No. C15410334) 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 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 promoters of the active ACTB and EIF4A2 genes, used as positive control, and for the inactive MYT1 gene, used as negative control. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

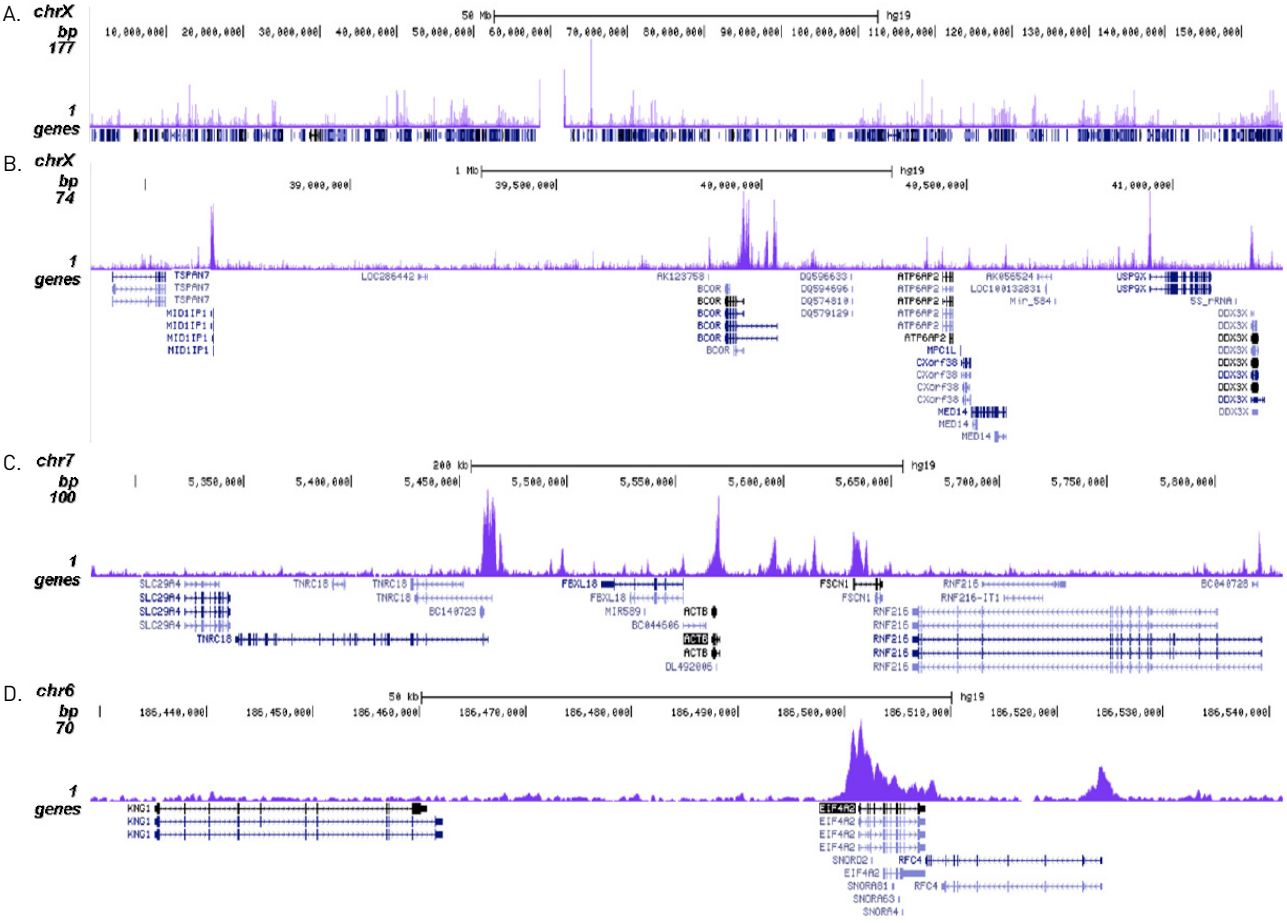

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against CHD1

ChIP was performed on sheared chromatin from 4 million K562 cells using 1 µg of the Diagenode antibody against CHD1 (Cat. No. C15410334) 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 2.5 Mb region of the human X-chromosome (fig 2A and B), and in two genomic regions surrounding the ACTB and EIF4A2 positive control genes (fig 2C and D).

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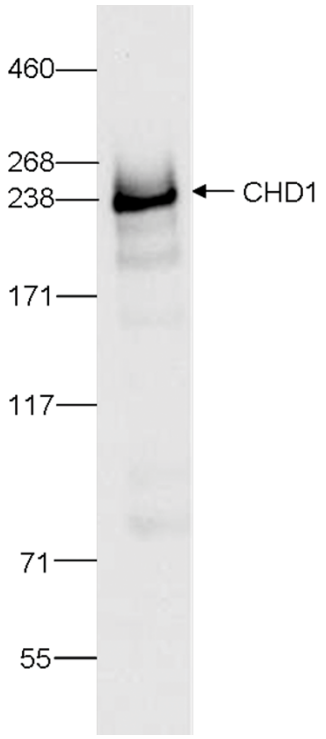

Figure 3. Western blot analysis using the Diagenode antibody directed against CHD1

Whole cell extracts from 293T cells were analysed by Western blot using the Diagenode antibody against CHD1 (Cat. No. C15410334) diluted 1:2,000 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.

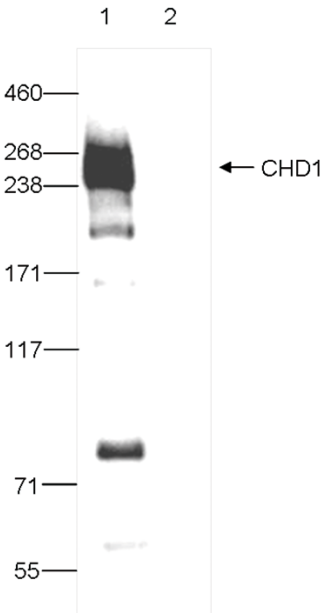

Figure 4. Immunoprecipitation analysis using the Diagenode antibody directed against CHD1

Immunoprecipitation was performed on whole cell extracts from HeLa cells using 3 µg of the Diagenode antibody against CHD1 (Cat. No. C15410334, lane 1). An equal amount of rabbit IgG was used as a negative control (lane 2). The immunoprecipitated CHD1 protein was detected by western blot with the CHD1 antibody diluted 1:200.

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