diagenode
A Hologic Company

ChIP-seq grade

TECHNICAL DATASHEET

CHD7 polyclonal antibody

Other names: CHD-1, KAL5, HH5, IS3, CRG

Cat. No. C15410340
Type: Polyclonal **ChIP grade/ChIP-seq grade**
Source: Rabbit
Lot #: A301-223A3
Size: 100 µl
Concentration: 0.2 µg/µl

Specificity: Human: 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 CHD7 (Chromodomain Helicase DNA Binding Protein 1), using a synthetic peptide containing a sequence from the C-terminal part of the protein[1].

Applications

Applications	Suggested dilution	References
ChIP*	1 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

CHD7 (UniProtKB/Swiss-Prot entry Q9P2D1) is a putative transcription regulator which may be involved in 45S precursor rRNA production. Mutations in CHD7 have been found in some patients with the CHARGE syndrome.

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

Results

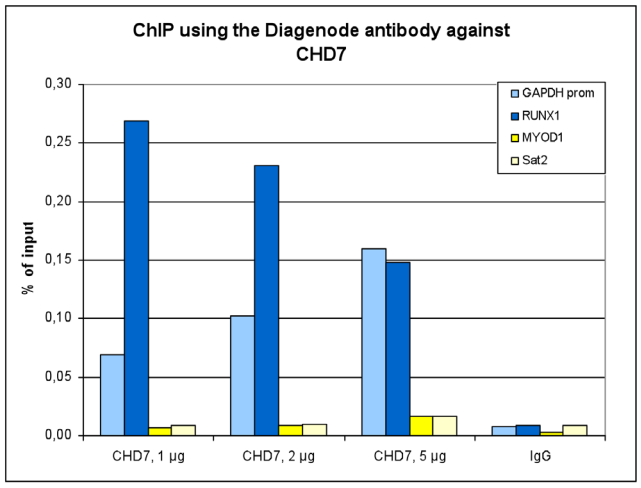

Figure 1. ChIP results obtained with the Diagenode antibody directed against CHD7

ChIP assays were performed using K562 cells, the Diagenode antibody against CHD7 (Cat. No. C15410340) 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 active RUNX1 and GAPDH genes, used as positive control, and for the inactive MYOD1 gene and the Sat2 satellite repeat, 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).

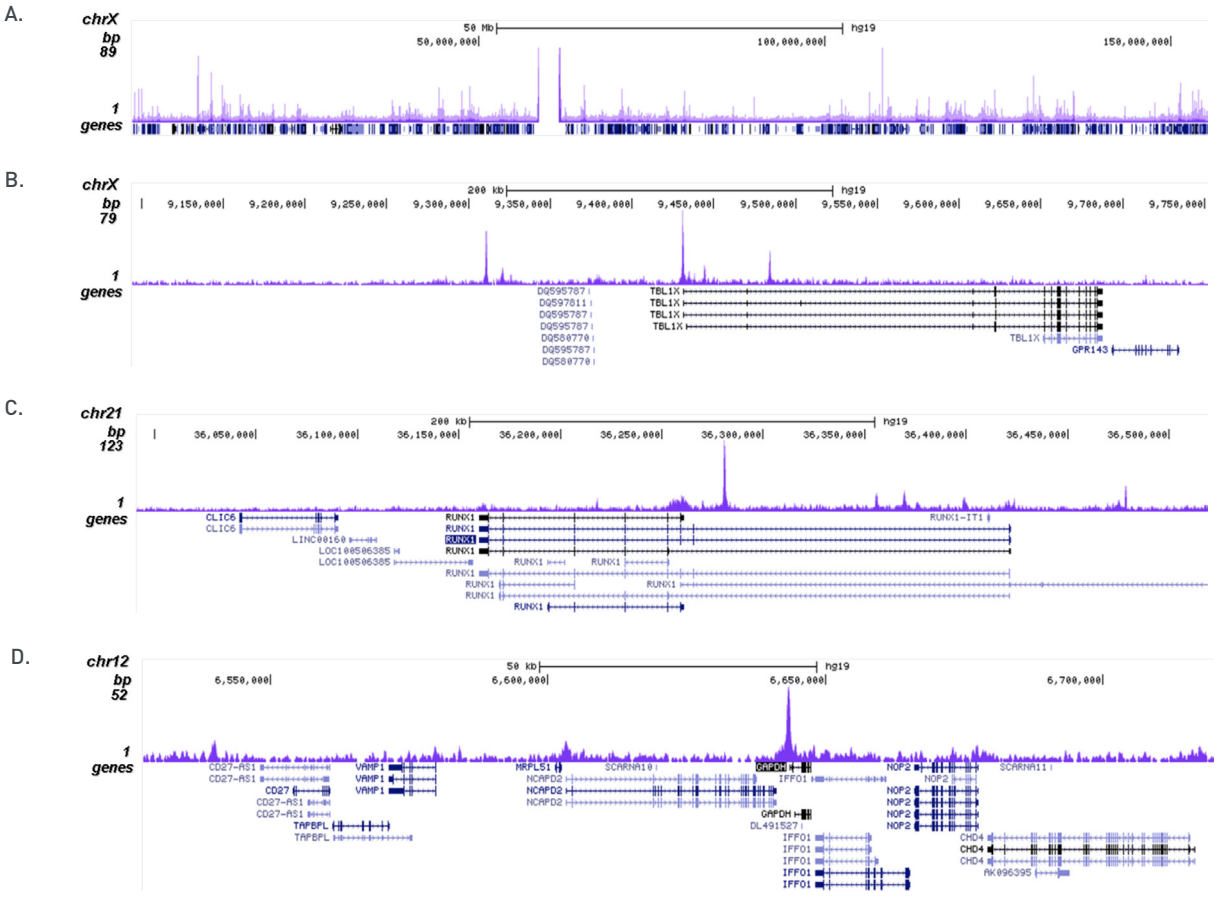

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against CHD7

ChIP was performed on sheared chromatin from 4 million K562 cells using 1 µg of the Diagenode antibody against CHD7 (Cat. No. C15410340) 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 X-chromosome (fig 2A and B), and in two genomic regions surrounding the RUNX1 and GAPDH positive control genes (fig 2C and D).

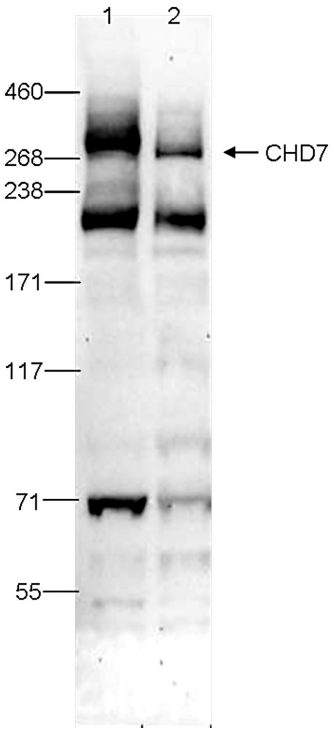

Figure 3. Western blot analysis using the Diagenode antibody directed against CHD7

Whole cell extracts from HeLa (lane 1) and 293T cells (lane 2) were analysed by Western blot using the Diagenode antibody against CHD7 (Cat. No. C15410340) 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.

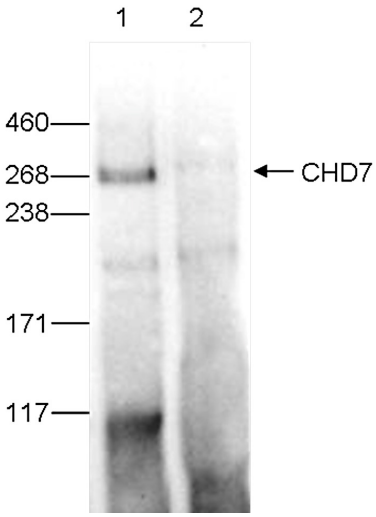

Figure 4. Immunoprecipitation using the Diagenode antibody directed against CHD7

Immunoprecipitation was performed on whole cell extracts from HeLa cells using 6 µg of the Diagenode antibody against CHD7 (cat. No. C15410340, 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 1:100.

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