diagenode
A Hologic Company

TECHNICAL DATASHEET

SMAD1(S206p) polyclonal antibody - Classic

Other name: MADH1, BSP1, MADR1, BSP-1, JV4-1, JV41

Cat. No. C15410274

Type: Polyclonal **ChIP-grade, ChIP-seq grade**

Source: Rabbit

Lot #: 001

Size: 100 µg

Concentration: 1.31 µg/µl

Specificity: Human, mouse: positive

Purity: Affinity purified polyclonal antibody in PBS containing 0.01 % azide.

Storage: Store at -20°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 SMAD1 (SMAD Family Member 1), phosphorylated at Ser206, using a KLH-coupled synthetic peptide.

Applications

	Suggested dilution	Results
ChIP*	2 - 5 µg per ChIP	Fig 1, 2
Western blot	1:500 - 1:3,000	Fig 3
Immunoprecipitation	2 µg per IP	

* 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

SMAD1 (UniProt/Swiss-Prot entry Q15797) is a transcriptional modulator that mediates multiple signaling pathways, such as those of the bone morphogenetic proteins (BMPs). BMPs are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. SMAD1 can be phosphorylated by the BMP receptor kinase, leading to its activation.

Results

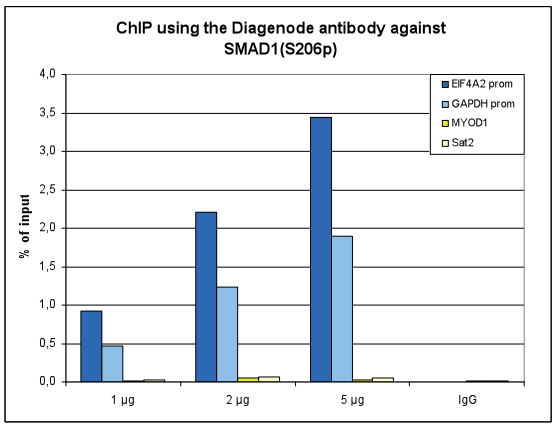

Figure 3. ChIP results obtained with the Diagenode antibody directed against SMAD1(S206p)

ChIP assays were performed using K562 cells, the Diagenode antibody against SMAD1(S206p) (Cat. No. C15410274) and optimized 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 of the antibody consisting of 1, 2 and 5 µg per ChIP experiment was analysed. IgG (1 µg/IP) was used as negative IP control. QPCR was performed with primers for the EIF4A2 and GAPDH promoters, 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).

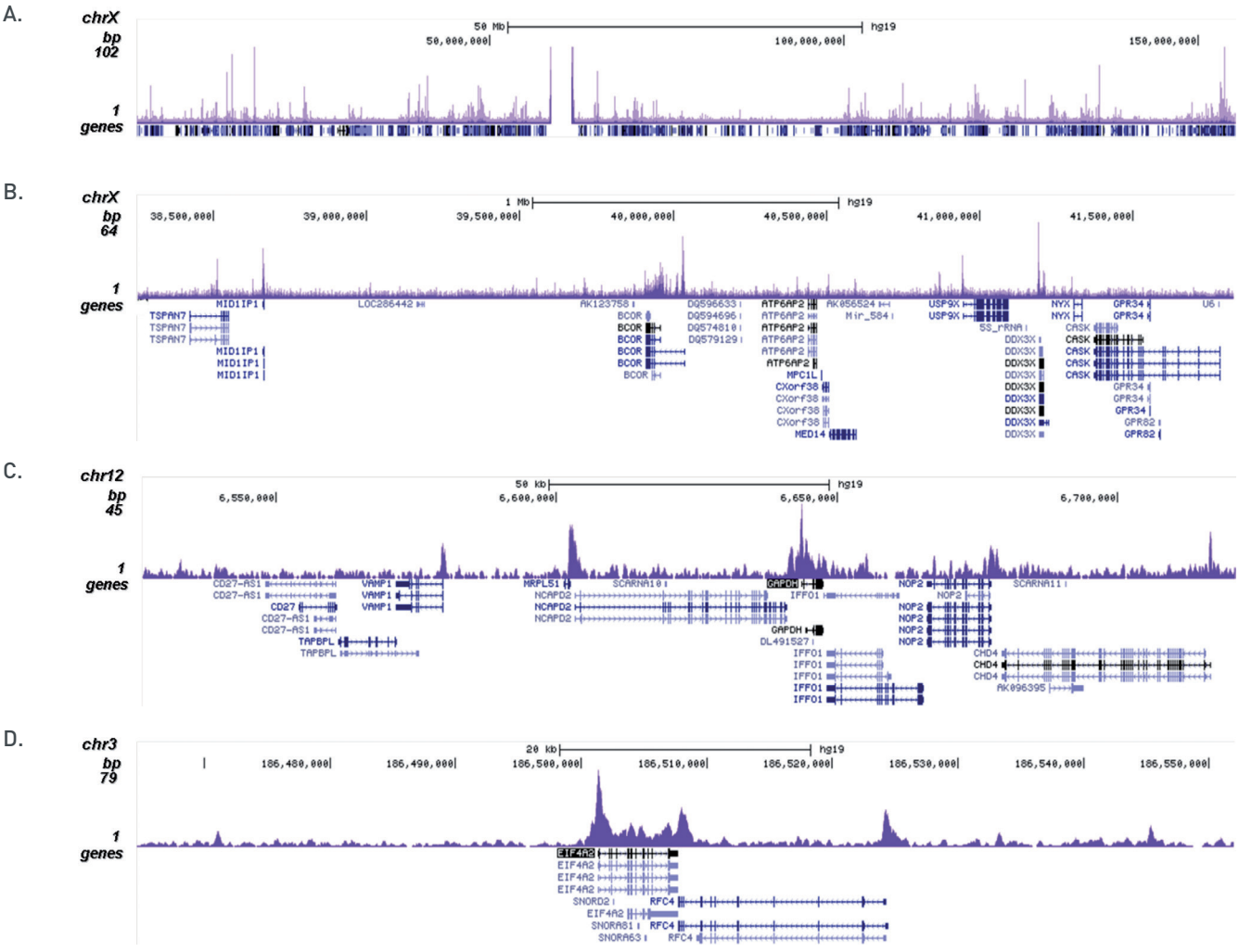

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against SMAD1(S206p)

ChIP was performed on sheared chromatin from 5 million K562 cells using 5 µg of the Diagenode antibody against SMAD1(S206p) (Cat. No. C15410274). 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 3 Mb region of the human X chromosome (fig 2A and B) and in two genomic regions surrounding the GAPDH and EIF4A2 genes on chromosome 12 and 3, respectively (fig 2C and D).

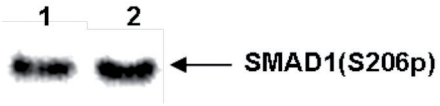

Figure 3. Western blot analysis using the Diagenode antibody directed against SMAD1(S206p)

Whole cell extracts (15 µg) from HepG2 (lane 1) and HaCat (lane 2) cells were analysed by Western blot using the Diagenode antibody against SMAD1(S206p) (Cat. No. C15410274) diluted 1:500.

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