

TAL1 monoclonal antibody

Other name: Tal-1, TCL2, SCL, BHLHa17

Cat. No. C15200012

Type: Monoclonal ChIP-grade/ChIP-seq grade

Isotype: IgG1

Source: Mouse

Lot #: 001

Size: 50 µg/50 µl

Concentration: 1 µg/µl

Specificity: Human: positive. Other species: not tested.

Purity: Affinity purified monoclonal antibody in PBS containing 0.05% 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: Monoclonal antibody raised in mouse against human TAL1 (T-Cell Acute Lymphocytic Leukemia 1), using a recombinant protein.

Applications

	Suggested dilution	Results
ChIP*	2 - 5 µg per ChIP	Fig 1, 2
IF	1:1,000	Fig 3

* Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-10 µg per IP.

Target description

TAL1 (UniProt/Swiss-Prot entry P17542) is a transcription factor involved in hemopoietic differentiation. It functions as a positive regulator of erythroid differentiation. TAL1 is implicated in the genesis of hemopoietic malignancies such as t-cell leukemia and cd3epsilon deficiency.

Results

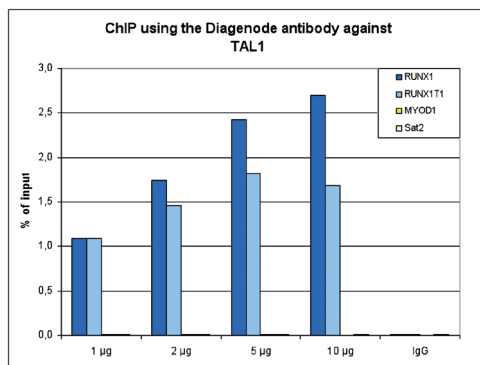


Figure 1. ChIP results obtained with the Diagenode monoclonal antibody directed against TAL1

ChIP was performed using K562 cells, the Diagenode monoclonal antibody against TAL1 (Cat. No. C15200012) 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 of the antibody consisting of 1, 2, 5 and 10 µg per ChIP experiment was analysed. IgG (2 µg/IP) was used as negative IP control. Quantitative PCR was performed with primers for the RUNX1 and RUNX1T1 genes, used as positive controls, and for the coding region of the inactive 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).

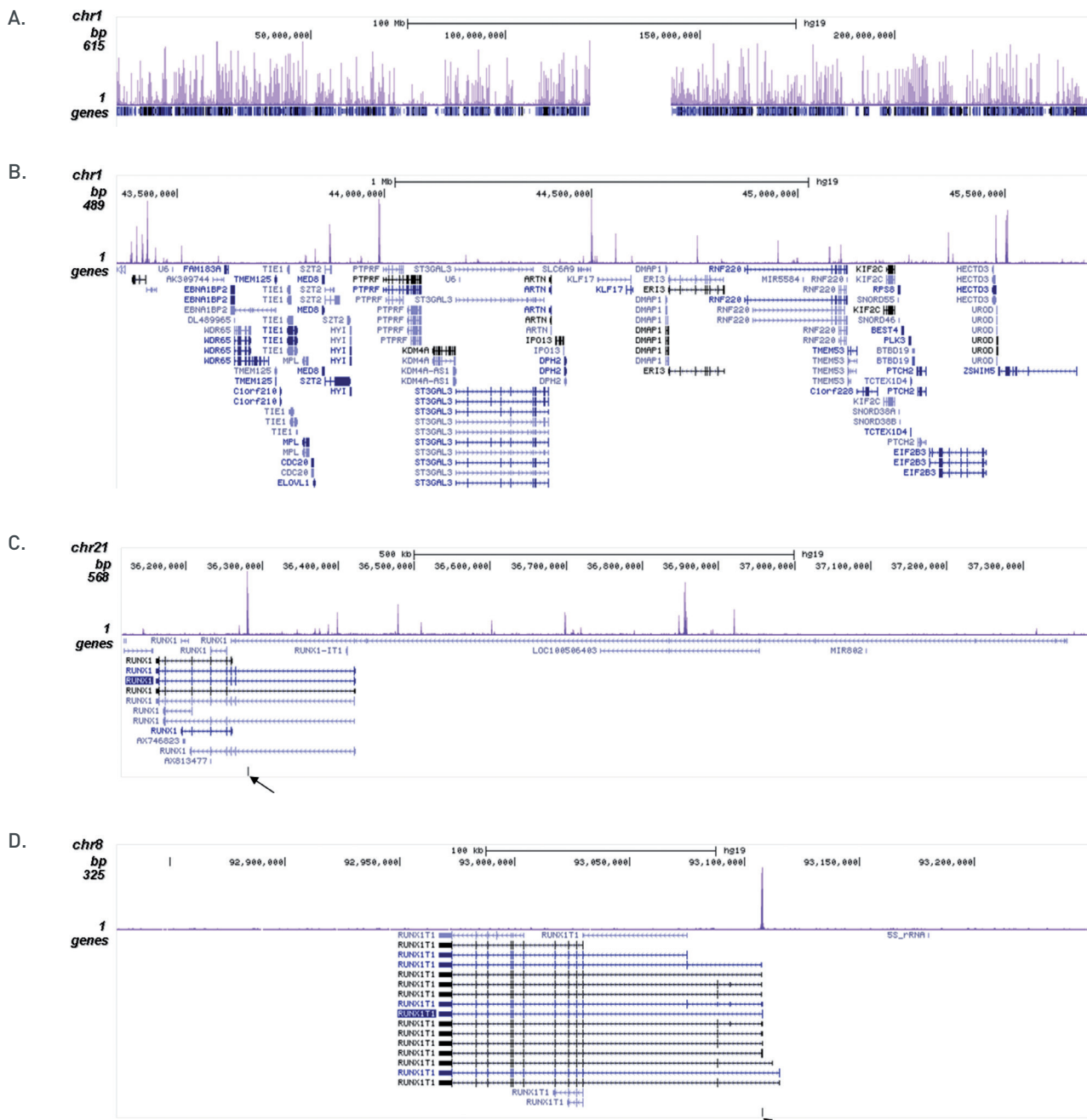


Figure 2. ChIP-seq results obtained with the Diagenode monoclonal antibody directed against TAL1

ChIP was performed with 5 µg of the Diagenode antibody against TAL1 (Cat. No. C15200012) on sheared chromatin from 4 million K562 cells as described above. The IP'd DNA was subsequently analysed on an Illumina HiSeq 2000. 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 peak distribution along the complete sequence and a 2.5 mb region of chromosome 1 (figure 2A and B) and in two regions surrounding the RUNX1 and RUNX1T1 positive control genes (figure 2C and D). The position of the amplicon used for ChIP-qPCR is indicated by an arrow.

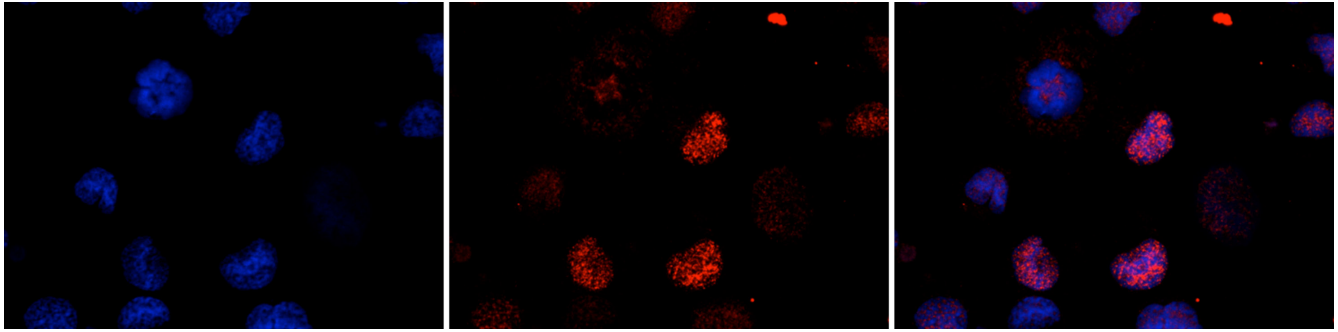


Figure 3. Immunofluorescence using the Diagenode monoclonal antibody directed against TAL1

K562 cells were stained with the Diagenode antibody against TAL1 (cat. No. C15200012) and with DAPI. Cells were fixed with 4% formaldehyde for 10' and blocked with PBS/TX-100 containing 1% BSA. The cells were immunofluorescently labelled with the TAL1 antibody (middle) diluted 1:1,000 in blocking solution followed by an anti-mouse antibody conjugated to Alexa594. The left panel shows staining of the nuclei with DAPI. A merge of both stainings is shown on the right.

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