

## TECHNICAL DATASHEET

### MLL1 polyclonal antibody

**Other names:** KMT2A, ALL1, CXXC7, TRX1, MLL, HRX, HTRX, HTRX1, WDST5

**Cat. No.** C15310264

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

**Source:** Rabbit

**Lot #:** A1542-001

**Size:** 100 µl

**Concentration:** Not determined

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

**Purity:** Whole antiserum from rabbit 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:** Polyclonal antibody raised in rabbit against human MLL1 (Mixed-Lineage Leukemia) using two KLH-conjugated synthetic peptides containing a sequence from the central region of the protein.

### Applications

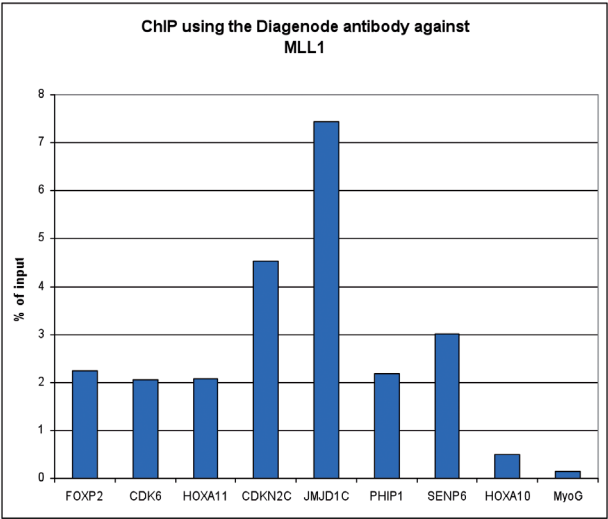
	Suggested dilution	Results
ChIP	2 µl/ChIP	Fig 1, 2
ELISA	1:100 - 1:1,000	Fig 3

\*Please note that the optimal antibody amount per ChIP should be determined by the end-user. We recommend testing 1-10 µl per IP. Target description

### Target description

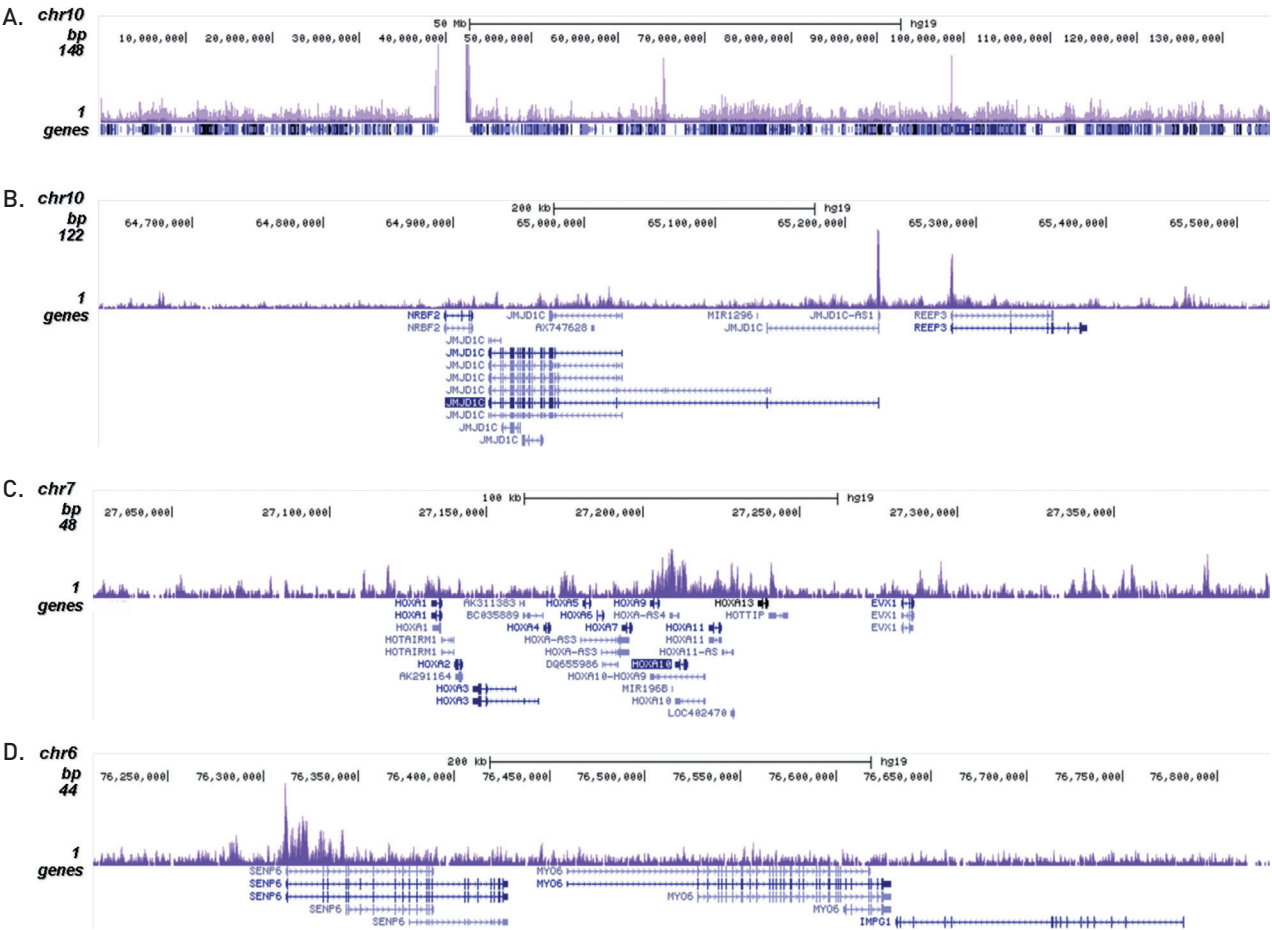
MLL1 (UniProtKB/Swiss-Prot entry Q03164) functions as a lysine methyltransferase responsible for the methylation of H3K4 which is associated with epigenetic transcriptional activation. MLL1 regulates the transcription of specific target genes, including many of the HOX genes and plays an essential role in regulating gene expression during early development and hematopoiesis. It also plays a role in the control of circadian gene expression. MLL1 is involved in several translocations which cause certain acute lymphoid leukemias and acute myeloid leukemias.

# Results



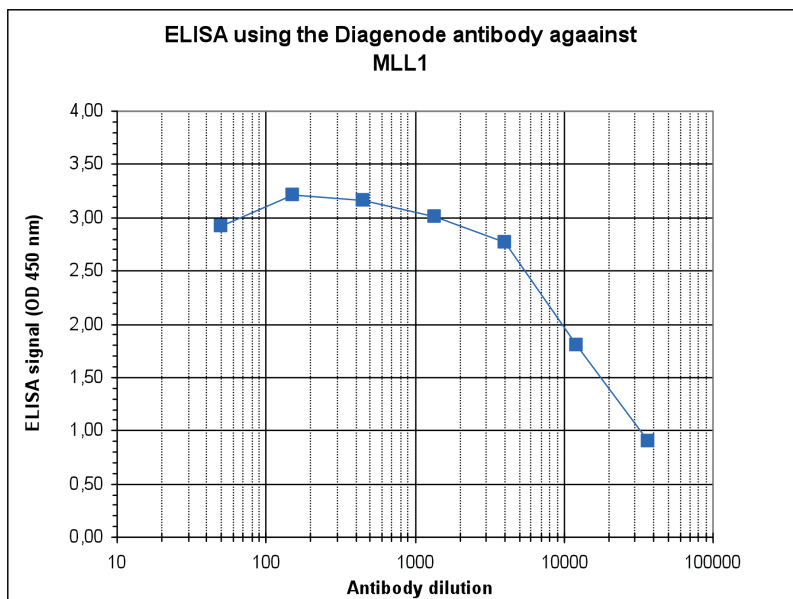
**Figure 1. ChIP results obtained with the Diagenode antibody directed against MLL1**

ChIP was performed on MV4-11 cells using the Diagenode antibody against MLL1 [Cat. No. C15310264]. Sheared chromatin from 1 million cells and 2 µl of antibody were used per ChIP experiment. QPCR was performed using primers specific for the indicated genes. Figure 1 shows the recovery (the relative amount of immunoprecipitated DNA compared to input DNA).



**Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against MLL1**

ChIP was performed as described above. The IP'd DNA of 5 ChIP's was pooled and 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 700 kb region of chromosome 10 containing the JMJD1C positive control gene (fig 2A and B), and in 2 genomic regions surrounding HOX cluster on chromosome 7 and the SENP6 gene on chromosome 6 (fig 2C and D).



**Figure 3. Determination of the antibody titer**

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode antibody directed against MLL1 (Cat. No. C15310264). The plates were coated with the peptides used for immunization of the rabbit. By plotting the absorbance against the antibody dilution (Figure 3), the titer of the antibody was estimated to be 1:15,100.

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