diagenode
A Hologic Company

TECHNICAL DATASHEET

MYH11 polyclonal antibody

Other names: SMMHC, AAT4, FAA4, SMHC

Cat. No. C15310254
Type: Polyclonal **ChIP-grade/ChIP-seq grade**
Source: Rabbit
Lot #: A1379-001
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 MYH11 (Myosin, Heavy Chain 11) using two KLH-conjugated synthetic peptides containing sequences from the C-terminal region of the protein.

Applications

	Suggested dilution	Results
ChIP *	5 µl/ChIP	Fig 1, 2
ELISA	1:200	Fig 3
Western blotting	1:1,000	Fig 4

Target description

MYH11 (UniProtKB/Swiss-Prot entry P35749) is a smooth muscle myosin belonging to the myosin heavy chain family which function as major contractile proteins. MYH11 is involved in a pericentric inversion of chromosome 16 (inv(16)(p13q22)) which produces a chimeric transcript consisting of the N terminus of CBFb and the C-terminal portion MYH11. This chromosomal rearrangement is associated with acute myeloid leukemia of the M4Eo subtype.

References citing this antibody

(1) Mandoli A, Singh AA, Jansen PWTC, Wierenga ATJ, Riahi H, Franci G, Prange K, Saeed S, Vellenga E, Vermeulen M, Stunnenberg HG and Martens JHA (2013) **CBFB–MYH11/RUNX1 together with a compendium of hematopoietic regulators, chromatin modifiers and basal transcription factors occupies self-renewal genes in inv(16) acute myeloid leukemia.** *Leukemia: 1-9.*

Results

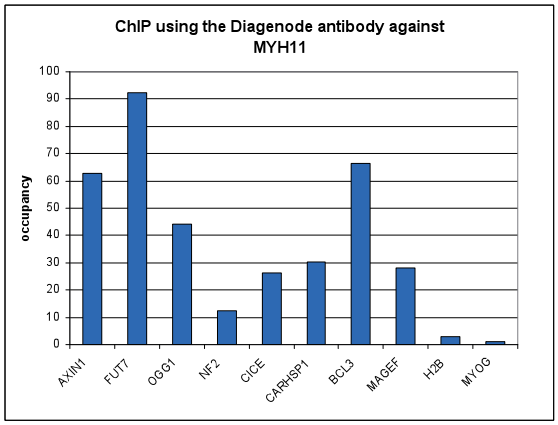

Figure 1. ChIP results obtained with the Diagenode antibody directed against MYH11

ChIP assays were performed using ME-1 cells, the Diagenode antibody against MYH11 (Cat. No. C15310254) and optimized primer pairs for qPCR. Sheared chromatin from 1.5 million cells and 5 µl of antibody were used per ChIP experiment. QPCR was performed using primers specific for the genes indicated. Figure 1 shows the relative occupancy, calculated as the ratio + control/background for which the MYOG gene was used.

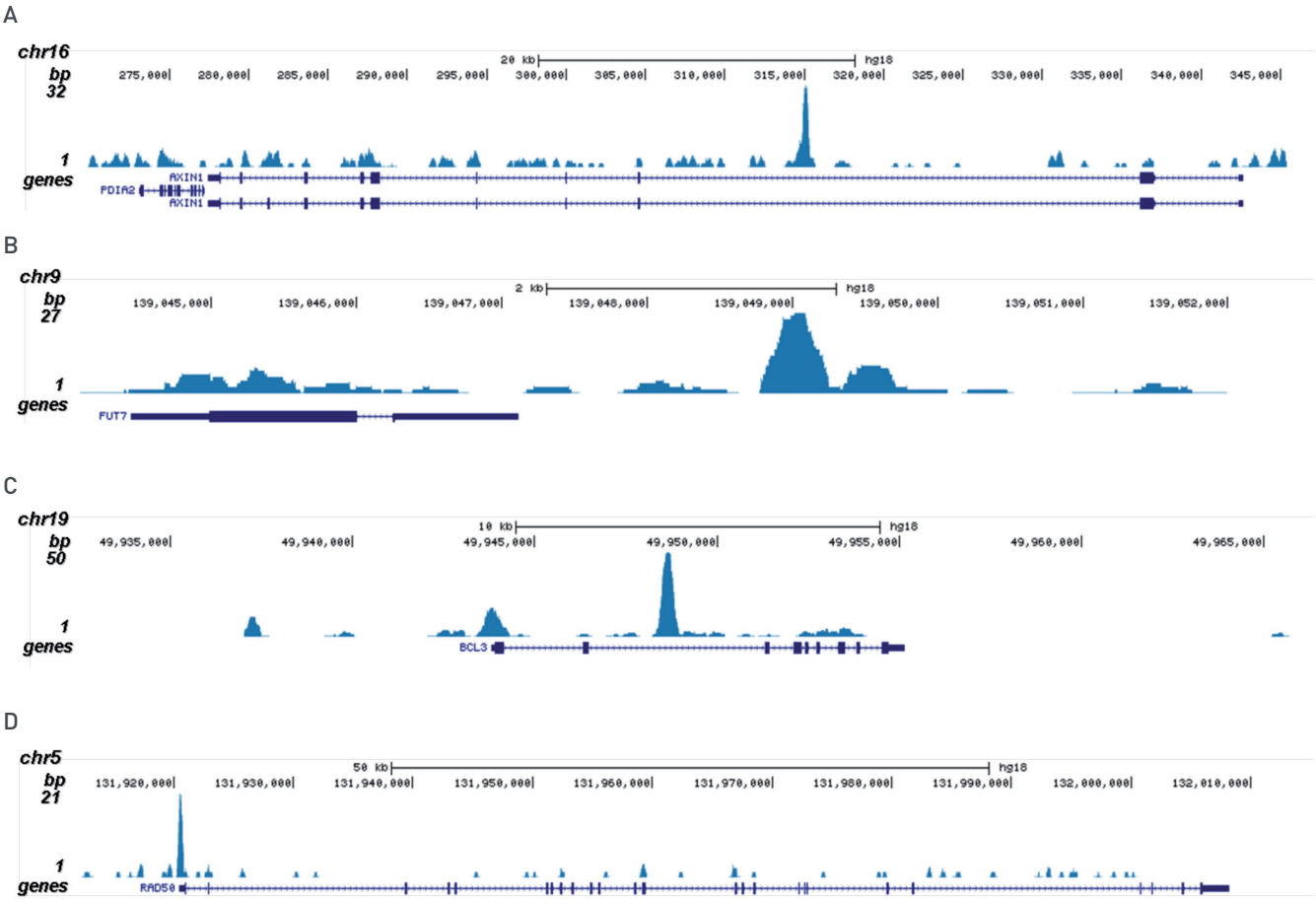

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against MYH11

ChIP was performed as described above. The IP'd DNA from 6 ChIP's was pooled and 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 signal in 4 genomic regions surrounding the AXIN1, FUT7, BCL3 and RAD50 positive control genes.

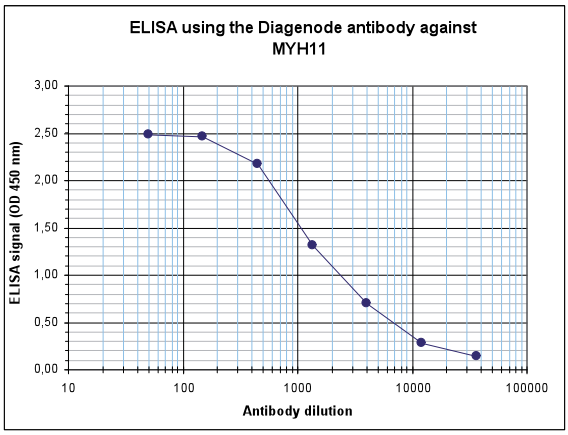

Figure 3. Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode antibody directed against human MYH11 (Cat. No. C15310254). 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 1:1,900.

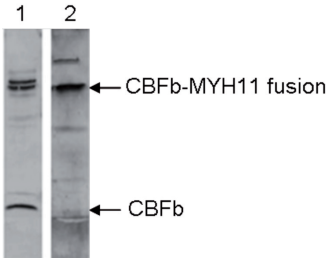

Figure 4. Western blot analysis using the Diagenode antibody directed against MYH11

Nuclear extracts of ME-1 cells were analysed by Western blot using the Diagenode antibodies against CBFb (Cat. No. C15310002, lane 1) and MYH11 (cat. No. C15310254, lane 2) diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the CBFb and CBFb-MYH11 fusion proteins is indicated on the right.

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