diagenode
Innovating Epigenetic Solutions

CBFb polyclonal antibody

Other names: PEBP2B, CBF-beta, PEA2-beta, PEB2-beta

Cat. No. C15310002

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

Source: Rabbit

Lot #: A1329-001

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 CBFb (core-binding factor, beta subunit) using two KLH-conjugated synthetic peptides containing sequences from the central region of the protein.

Applications

	Suggested dilution	Results
ChIP*	4 µl/ChIP	Fig 1, 2
ELISA	1:500	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.

References citing this antibody:

(1) Martens JHA, Mandoli A, Simmer F, Wierenga B-J, Saeed S, Singh AA, Altucci L, Vellenga E, Stunnenberg HG (2012) ERG and FLI1 binding sites demarcate targets for aberrant epigenetic regulation by AML1-ETO in acute myeloid leukemia. Blood 120: 4038-4048.

Target description

CBFb (UniProtKB/Swiss-Prot entry Q13951) represents the beta subunit of a heterodimeric core-binding transcription factor belonging to the PEBP2/CBF transcription factor family. These transcription factors regulate a host of genes specific to haematopoiesis (e.g. RUNX1) and osteogenesis (e.g. RUNX2). The beta subunit is the regulatory subunit which allosterically enhances the activity of the DNA binding alpha subunit as the complex binds to the core site of various enhancers and promoters. CBFb can be involved in a chromosomal rearrangement of chromosome 16 (inv(16)(p13q22)) which produces a fusion protein consisting of the N terminus of CBFb and the C-terminal portion of MYH11. This chromosomal rearrangement is associated with acute myeloid leukaemia of the M4Eo subtype.

Results

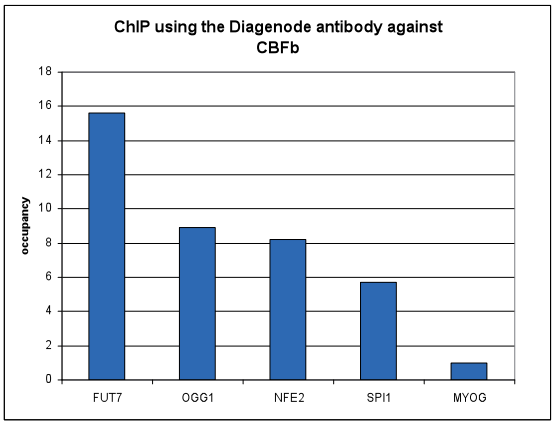
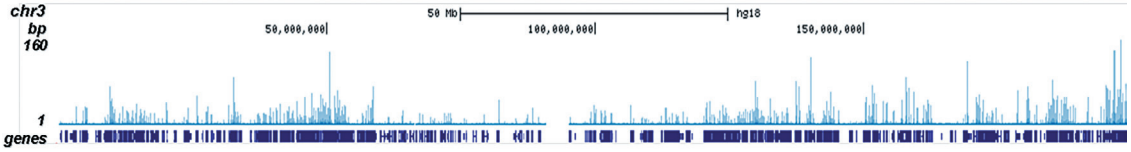


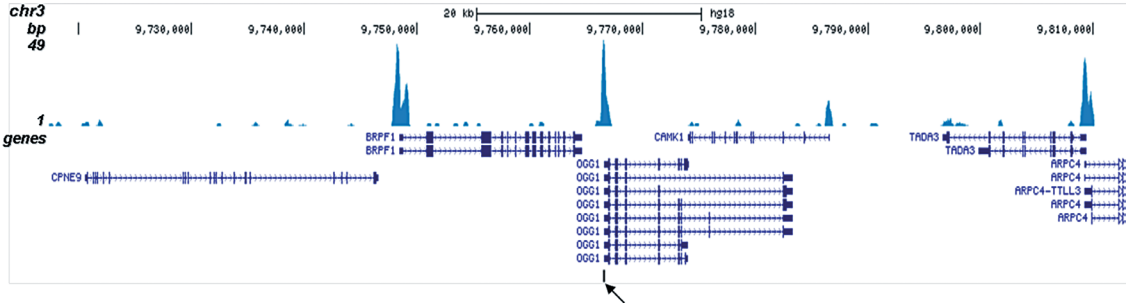
Figure 1. ChIP results obtained with the Diagenode antibody directed against CBFb

ChIP assays were performed using SKNO-1 cells, the Diagenode antibody against CBFb (Cat. No. C15310002) and optimized primer pairs for qPCR. Sheared chromatin from 1.25 million cells and 4 µl of antibody were used per ChIP experiment. QPCR was performed using primers specific for the FUT7, OGG1, NFE2, and SPI1 genes. Figure 1 shows the relative occupancy, calculated as the ratio + control/background for which the MYOG gene was used.

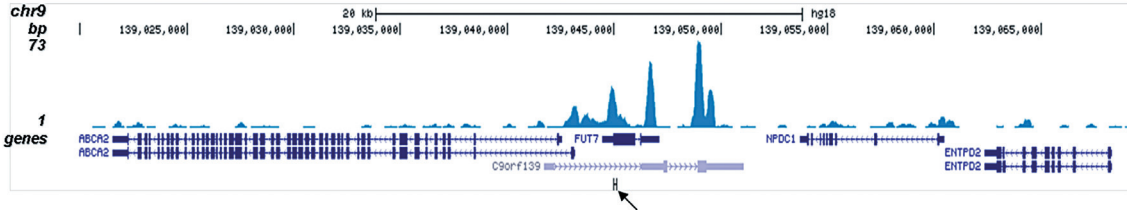
A. ChIP-seq signals on chromosome 3



B. Genomic region on chromosome 3 surrounding the OGG1 gene



C. Genomic region on chromosome 9 surrounding the FUT7 gene



D. Genomic region on chromosome 12 surrounding the NFE2 gene

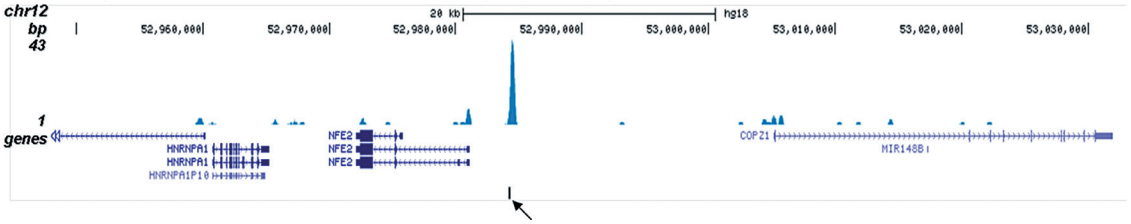


Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against CBFb

ChIP was performed as described above. The IP'd DNA from 6 ChIP's was pooled and analysed with an Illumina Genome Analyzer. Library preparation, cluster generation and sequencing were performed according to the manufacturer's instructions. The 32 bp tags were aligned to the human reference genome (hg18) using the ELAND algorithm. Figure 2 shows the results of the complete chromosome 3 and three genomic regions region surrounding the OGG1, FUT7 and NFE2 genes, respectively. The position of the PCR amplicon is indicated with an arrow.

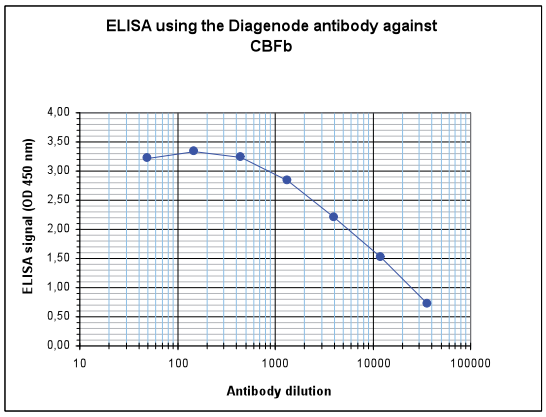


Figure 3. Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode antibody directed against human CBFb (Cat. No. C15310002). 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 1:8,800.

Diagenode sa. BELGIUM | **EUROPE**
LIEGE SCIENCE PARK
Rue Bois Saint-Jean, 3
4102 Seraing (Ougrée) - Belgium
Tel: +32 4 364 20 50
Fax: +32 4 364 20 51
orders@diagenode.com
info@diagenode.com

Diagenode Inc. USA | **NORTH AMERICA**
400 Morris Avenue, Suite 101
Denville, NJ 07834 - USA
Tel: +1 862 209-4680
Fax: +1 862 209-4681
orders.na@diagenode.com
info.na@diagenode.com

Last update: August 22, 2012