

PRODUCT NAME		
MBD1 polyclonal antibody		
Other names: CXXC3, PCM1, RFT		
Cat. No. pAb-078-050	Type: Polyclonal ChIP grade	Size: 50 µg/72 µl
Lot #: A17-0042	Source: Rabbit	Concentration: 0.7 µg/µl

Description: Polyclonal antibody raised in rabbit against human MBD1 (Methyl-CpG-binding domain protein 1), using a KLH-conjugated synthetic peptide containing a sequence from the N-terminal part of the protein.

Specificity: Human: positive
Other species: not tested

Applications	Suggested dilution	References
ELISA	1:1,000	Fig 1
Western blotting	1:500	Fig 2
ChIP	1.5 µg	Fig 3

Purity: Affinity purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.

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.

Last data sheet update: February 19, 2010

Target description

MBD1 (UniProt/Swiss-Prot entry Q9UIS9) is a transcriptional repressor that specifically binds to methylated CpG dinucleotides in promoter sequences. MBD1 acts by recruiting a variety of histone deacetylases (HDAC's) and chromatin remodelling factors. MBD1-dependent transcriptional repression is mediated by ATF7IP through the recruitment of factors such as the histone methyltransferase SETDB1. MBD1 probably forms a complex with SETDB1 and ATF7IP which couples DNA methylation to H3K9 trimethylation and represses transcription.

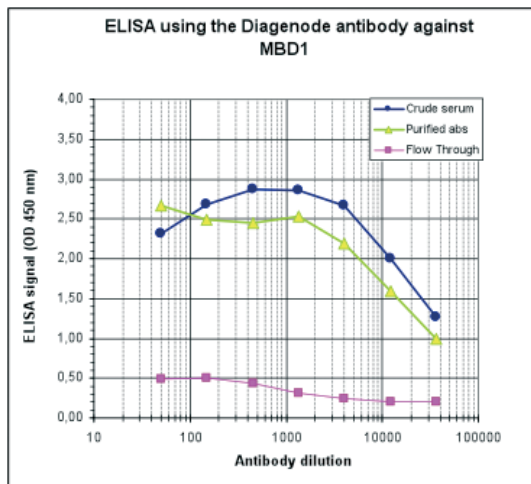


Figure 1
Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode antibody directed against human MBD1 (Cat. No. pAb-078-050), crude serum and Flow Through. The plates were coated with the peptide used for immunization of the rabbit. By plotting the absorbance against the antibody dilution (Figure 1), the titer of the purified antibody was estimated to be 1:20,000.

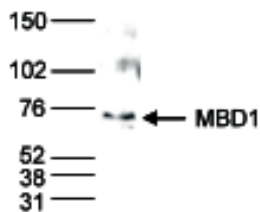


Figure 2
Western blot analysis using the Diagenode antibody directed against MBD1

Nuclear extracts of HeLa cells (40 µg) were analysed by Western blot using the Diagenode antibody against MBD1 (Cat. No. pAb-078-050) diluted 1:500 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right, the marker (in kDa) is shown on the left.

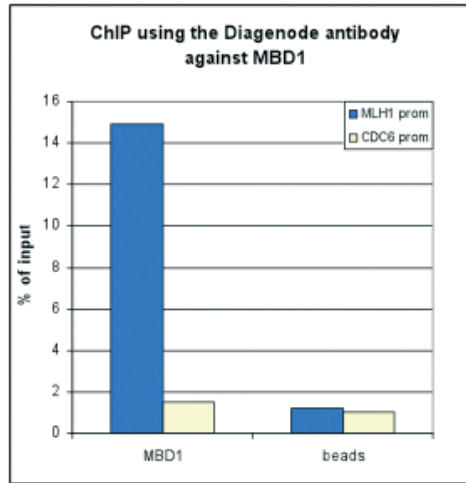


Figure 3

ChIP results obtained with the Diagenode antibody directed against MBD1

ChIP assays were performed using human osteosarcoma (U2OS) cells, the Diagenode antibody against MBD1 (Cat. No. pAb-078-050) and optimized PCR primer sets. Sheared chromatin from 1×10^6 cells and $1.5 \mu\text{g}$ of antibody were used per ChIP experiment. Beads only were used as a negative IP control. Quantitative PCR was performed with primers for the promoters of the MLH1 gene (used as a positive control) and CDC6 gene (used as a negative control). Figure 3 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).