

H3K36me2 monoclonal antibody

Cat. No. C15200182

Type: Monoclonal ChIP-grade

Source: Mouse

IgG isotype: IgG1

Lot #: 001-11

Size: 50 µg/ 50 µl

Concentration: 1 µg/µl

Specificity: Human: positive

Other species: not tested

Purity: Protein A 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 histone H3 dimethylated at lysine 36 (H3K36me2), using a KLH-conjugated synthetic peptide.

Applications

	Suggested dilution	References
ChIP *	1-2 µg/ChIP	Fig 1
ELISA	1:3,000	Fig 2
Dot blotting	1:10,000	
Western blotting	1:1,000 - 1:2,000	

* Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-5 µg per IP.

Target description

Histones are the main constituents of the protein part of chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Two core histones of each class H2A, H2B, H3 and H4 assemble and are wrapped by 146 base pairs of DNA to form one octameric nucleosome. Histone tails undergo numerous post-translational modifications, which either directly or indirectly alter chromatin structure to facilitate transcriptional activation or repression or other nuclear processes. In addition to the genetic code, combinations of the different histone modifications reveal the so-called "histone code". Histone methylation and demethylation is dynamically regulated by respectively histone methyl transferases and histone demethylases.

Results

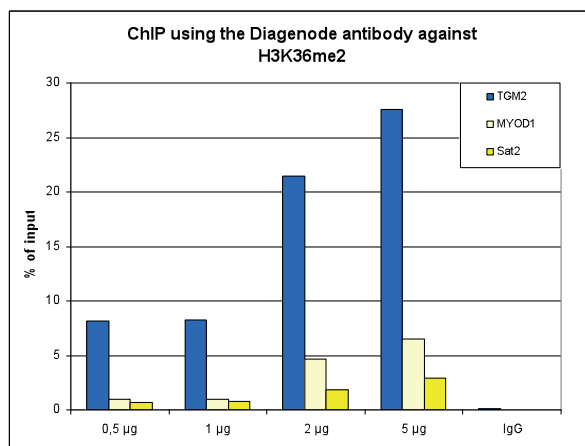


Figure 1. ChIP results obtained with the Diagenode monoclonal antibody directed against H3K36me2

ChIP assays were performed using human HeLa cells, the Diagenode monoclonal antibody against H3K36me2 (Cat. No. C15200182) and optimized PCR primer pairs for qPCR. ChIP was performed with the "Auto Histone ChIP-seq" kit (cat. No. C01010020), using sheared chromatin from 1 million cells. A titration consisting of 0.5, 1, 2 and 5 µg of antibody per ChIP experiment was analyzed. IgG (1 µg/IP) was used as a negative IP control. Quantitative PCR was performed with primers specific for a genomic region upstream of the TGM2 gene, used as a positive control, and for 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).

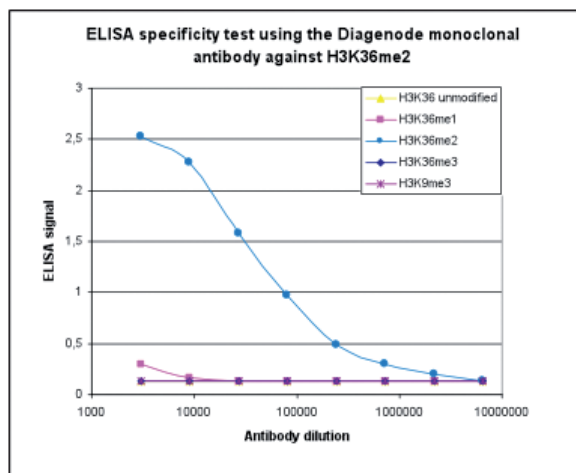


Figure 2. Cross reactivity of the Diagenode monoclonal antibody directed against H3K36me2

To test the specificity an ELISA was performed using a serial dilution of the Diagenode monoclonal antibody against H3K36me2 (Cat. No. C15200182). The wells were coated with peptides containing the unmodified H3K36 region as well as the mono-, di- and trimethylated H3K36 and the trimethylated H3K9. Figure 2 shows a high specificity of the antibody for the peptide containing the modification of interest.

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