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Data Sheet

Anti-H3K36me2 monoclonal antibody

Catalog #: 25247

Lot #: 230316	**Host Species:** Mouse
Conc.: 1.0 mg/ml	**Species Reactivity:** Human
Size: 50 µg	**Immunogen:** Synthetic peptide
Clonality: Monoclonal	**Purification:** Protein A purified

Description: Monoclonal antibody raised in Mouse against histone H3 dimethylated at lysine 36 (H3K36me2), using a KLH-conjugated syntheticpeptide.

Background: 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.

Formulation: PBS containing 0.05% azide

Applications: ChIP (1 - 5 µg/ChIP), ELISA (1:3000), DB (1:10,000), WB (1:1000 - 1:2000)

Storage/Stability: Store at -80°C for up to 2 years. Centrifuge after first thaw to maximize product recovery. Aliquot to avoid repeated freeze/thaw cycles. Aliquots may be stored at -20°C for at least one month.

Warnings: Avoid freeze/thaw cycles

Notes: The optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-5 µg per IP

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Quality Assurance:

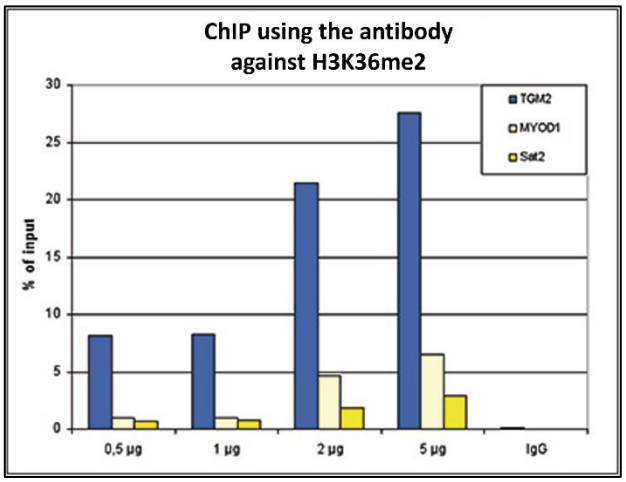

Figure 1. ChIP results obtained with the monoclonal antibody directed against H3K36me2
ChIP assays were performed using human HeLa cells, the monoclonal antibody against H3K36me2 (Cat. No. 25247) and optimized PCR primer pairs for qPCR. ChIP was performed with the "Auto Histone ChIP-seq" kit, using sheared 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).

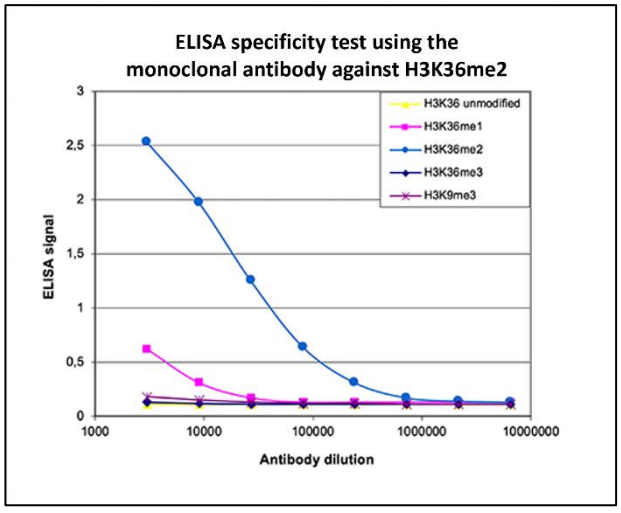

Figure 2: Cross reactivity of the monoclonal antibody directed against H3K36me2
To test the specificity an ELISA was performed using a serial dilution of the monoclonal antibody against H3K36me2 (cat. No. 25247). The wells were coated with peptides containing the unmodified H3K36 region as well as the 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.