

H3K9me1 Antibody

ALTERNATE NAMES: Histone H3

CATALOG #: 6804-50

AMOUNT: 50 µl

HOST/ISOTYPE: Rabbit

IMMUNOGEN: KLH-conjugated synthetic peptide of Histone H3 containing monomethylated lysine 9.

FORM: Liquid

FORMULATION: In PBS with 0.05% (W/V) sodium azide.

PURIFICATION: Whole antiserum from rabbit

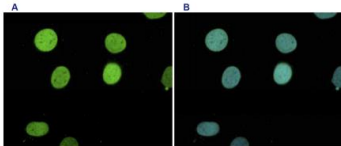
SPECIES REACTIVITY: Human.

STORAGE CONDITIONS: Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.

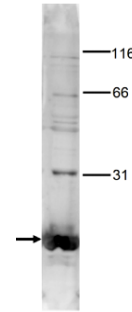
DESCRIPTION: Histones are the main constituents of the protein part of chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Histone tails undergo numerous post-translational 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. Methylation of histone H3K9 is associated with gene repression and heterochromatin formation, although higher levels of H3K9me1 have been found in some more active promoters.

APPLICATION: IF: 1:200, WB: 1:1000, ELISA: 1:2000 – 1:3000, Dot Blot: 1:200,000, ChIP: 10 µl/ChIP.

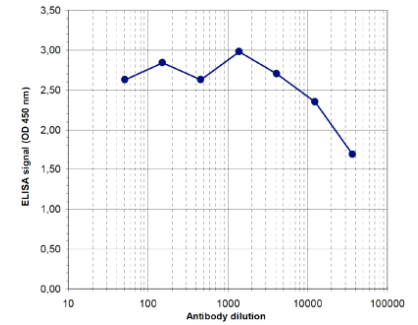
Note: This information is only intended as a guide. The optimal dilutions must be determined by the user.



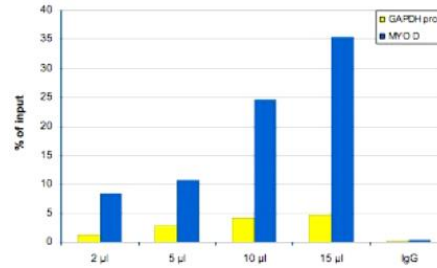
HeLa cells were stained with the antibody and with DAPI. Fig A: cells were immunofluorescently labelled with the antibody followed by goat anti-rabbit antibody conjugated to DyLight. Fig B: staining of the nuclei with DAPI, which specifically labels DNA. Both antibody and DAPI staining are restricted to the nucleus.



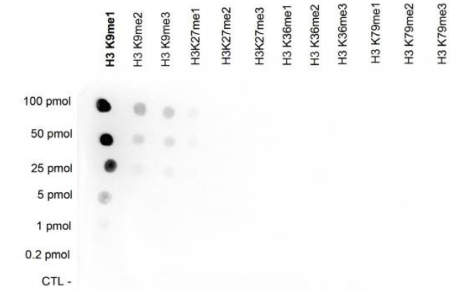
HeLa cells (15 µg) were analysed by WB blot using the H3K9me1 antibody



To determine the titer, an ELISA was performed using a serial dilution of the antibody. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution the titer of the antibody was estimated to be 1:50,000.



ChIP assays were performed using human osteosarcoma (U2OS) cells and the antibody and optimized PCR primer sets for qPCR. A titration of the antibody consisting of 2, 5, 10 and 15 µl per ChIP experiment was analysed. IgG (5 µg/IP) was used as negative control. The Fig shows the recovery, expressed as a % of input (the relative amount of IP DNA compared to input DNA after qPCR analysis).



A Dot Blot analysis was performed to test the cross reactivity of the antibody with peptides containing other modifications of histone H3 including di- and trimethylation of the same lysine and mono-, di- and trimethylation of lysine 27, 36 and 79. 100 to 0.2 pmol of the peptide containing the respective histone modification were spotted on a membrane. The Fig shows a high specificity of the antibody for the modification of interest.

RELATED PRODUCTS:

- H3R17me2 Antibody (Cat # 6803-50)
- H3K36me2 Antibody (Cat # 6805-50)
- H3 Pan Antibody (Cat # 6806-50)
- H4K8ac Antibody (Cat # 6807-50)

FOR RESEARCH USE ONLY! Not to be used on humans.

