

5-mCpA antibody (mAb)

Catalog No.: RA9048

Basic Information

Molecular weight**Category**

Monoclonal antibody

Applications

DB

Cross-Reactivity

Not Species Specific

Background

DNA methylation is important for regulation of transcription, and in processes including imprinting, gene silencing and cancer development. Methylation occurs predominantly at cytosine within the dinucleotide CpG (meCpG), which is frequently found in promoter regions near transcription start sites, as well as in promoters for functional non-coding RNAs. However, methylation at CpG dinucleotides makes them susceptible to both spontaneous deamination and enzyme-mediated deamination, resulting in thymine substitution (T/G mismatch) and the formation of a CpA dinucleotide in the opposite strand. Therefore, there is a strong correlation of CpG dinucleotide depletion or "suppression" with an observed increase in TpG/CpA dinucleotides. In mammals, there are certain cell types in which significant levels of methylation at CpA, (meCpA), CpT (meCpT), CpC (meCpC) is also observed, including embryonic stem cells, oocytes, primordial germ cells and neurons. Early observations suggest that meCpA, in particular, has different nuclear distribution than meCpG, and that meCpA may associate with active transcription rather than suppression.

Recommended Dilutions

DB 1 µg/ml

Product Information

Source	Mouse
Isotype	IgG1
Purification	Protein A Chromatography
Storage buffer	Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.
Storage Conditions	Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage.

Note: For in vitro research use only, not for diagnostic or therapeutic use, This product is not a medical device.

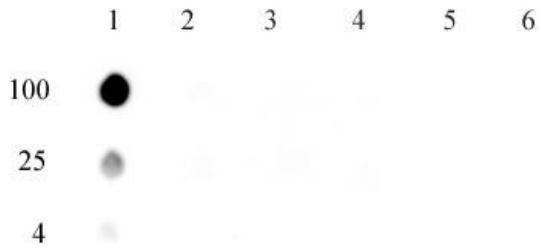
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5-mCpA Antibody Specificity Dot blot analysis was used to confirm the specificity of 5-mCpA antibody for the 5-mCpA dinucleotide. Single-stranded DNA oligonucleotides (amount of oligo in nanograms listed on the left side of the blot) were spotted on to a positively charged nylon membrane and blotted with 5-mCpA (1 ug/ml dilution). Column 1: 5-mCpA. Column 2: CpA. Column 3: 5-meCpC. Column 4: 5-meCpT. Column 5: 5-meCpG. Column 6: Ap5mC.



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