

## 5-Methylcytosine (5-mC) antibody (rAb)

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**Catalog No:** 91311

**Clone:** RM231

**Isotype:** IgG

**Application(s):** DB, ICC, MeDIP

**Reactivity:** Human, Not Species Specific

**Quantity:** 50 µg

**Purification:** Protein A Chromatography

**Host:** Rabbit

**Concentration:** 1 µg/µl

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**Background:** 5-Methylcytosine (5-Methylcytidine) is a modified base that is found in the DNA of plants and vertebrates. DNA methylation is an epigenetic event in which DNA methyltransferases (DNMTs) catalyze the reaction of a methyl group to the fifth carbon of cytosine in a CpG dinucleotide. This modification helps to control gene expression and is also involved in genomic imprinting, while aberrant DNA methylation is often associated with disease.

**Immunogen:** BSA-conjugated 5-methylcytosine.

**Buffer:** PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide.

**Application Notes:**

Validated Applications:

DB: 0.5 - 2 µg/ml

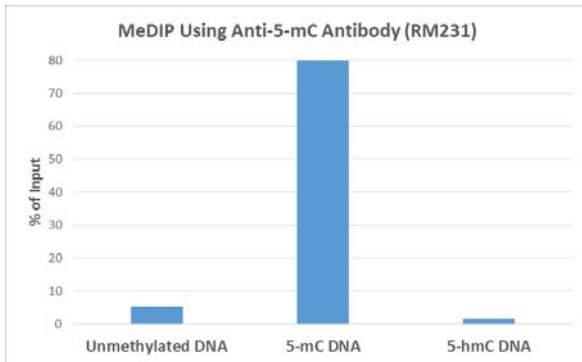
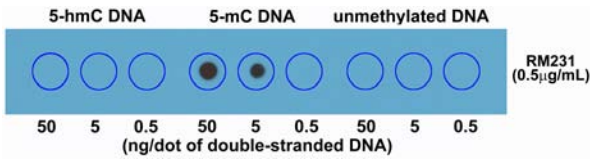
ICC: 0.5 - 2 µg/ml

MeDIP: 0.2 - 2 µg/ml

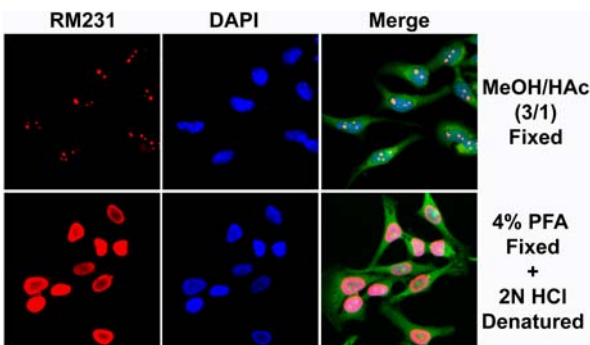
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

**Dot blot of 5-Methylcytosine (5-mC) antibody (rAb).** Dot blot of double stranded DNA using 5-Methylcytosine (5-mC) antibody (RM231). The membrane was pre-spotted with 50, 5, and 0.5 ng/dot of double stranded 5-Hydroxymethylcytosine (5-hmC) DNA, 5-Methylcytosine (5-mC) DNA, and unmethylated DNA. The pre-spotted membrane was then blotted with 5-Methylcytosine (5-mC) antibody at 0.5 µg/ml.



**MeDIP of 5-Methylcytosine (5-mC) antibody (rAb).** MeDIP was performed using 5-Methylcytosine (5-mC) antibody (RM231) at a 2:1 DNA:Ab ratio. 1 ng of unmethylated, 5-Methylcytosine (5-mC) or 5-Hydroxymethylcytosine (5-hmC) DNA standard (897 bp) was spiked in 1 µg of genomic DNA isolated from HeLa cells as the control. Realtime PCR was then performed to determine the capture of DNA standard as in % of input.



**Immunofluorescence stain of 5-Methylcytosine (5-mC) antibody (rAb).** HeLa cells were stained using 5-Methylcytosine (5-mC) antibody (RM231) antibody at 1 µg/ml (red). Actin filaments have been labeled with fluorescein phalloidin (green), and nuclei stained with DAPI (blue).