



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

Catalog No.: RA9004

#### **Basic Information**

**Molecular weight** 

**Category** Primary antibody

Applications DB, ELISA, FC, ICC, IF, IHC, MeDIP

**Cross-Reactivity** Human, Not Species Specific

### 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. The 5-methylcytidine antibody (Clone 33D3) has been developed to discriminate between the modified base and its normal cytosine counterpart, allowing for gene promoter methylation analysis.

#### **Recommended Dilutions**

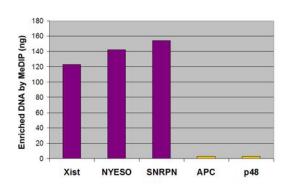
MeDIP	1µg/IP
IHC (FFPE)	1:1000
ELISA	1:10000

## **Product Information**

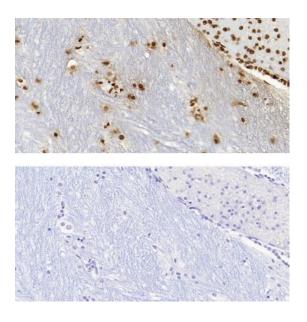
Source Isotype Purification	Mouse IgG Protein A Chromatography
Storage buffer	Purified IgG in 10 mM phosphate, 0.15 M NaCl and 0.01% thimerosal. Thimerosal is highly toxic
Storage Conditions	Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated 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.







5-Methylcytosine antibody (mAb) (Clone 33D3) tested by Methyl-DNA Immunoprecipitation (MeDIP). Human DNA (500 ng) digested with Mse I was subjected to MeDIP and then analyzed by quantitative real-time PCR with primers specific for genes that are normally methylated (Xist, NYESO and SNRPN) or unmethylated (APC and p48). The MeDIP'd DNA (enriched DNA) was plotted.



5-Methylcytosine (5-mc) antibody (pAb) tested by Immunohistochemistry Punctate nuclear staining pattern is detected in Formalin-fixed, paraffinembedded tissue sections from human substantia nigra (midbrain). Top Panel: 5-mC antibody at 1:1000 dilution. Bottom Panel: No primary antibody (2nd step antibody alone)