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Product Data Sheet

Research use only; not to be administered to humans or used for medical diagnostics

*Optim*Ab 5-Methylcytosine (33D3) Monoclonal Antibody

Catalog # : BI-MECY-0100 • BI-MECY-0500 • BI-MECY-1000

Size: 0.1mg/0.1mL • 0.5mg/0.5mL • 1mg/1mL

Concentration: 1 mg/mL

Formulation: Cell culture supernatant dialyzed against PBS + 0.01% Thimerosal

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Clone: 33D3

Isotype: IgG1, lambda

Host: Mouse

Reactivity: 5-Methylcytosine

Antibody Description:

Clone 33D3 recognizes the modified base 5-methylcytosine (5-MeCyt) found in plant and vertebrate DNA. It specifically distinguishes 5-MeCyt from its normal DNA base counterpart, cytosine, making it an ideal tool for gene promoter methylation analysis. DNA methylation is a postreplication process involved in the establishment of genomic imprinting, in the control of gene expression and of differentiation. Carcinogenesis is associated with alterations of the DNA methylation pattern: a global DNA hypomethylation is often detected in tumor tissues, associated with local hypermethylation sites. This antibody has been developed to discriminate between the modified base and its normal counterpart. It has been used to detect alterations in the urinary excretion of nucleosides by cancer patients, to visualize the distribution of methyl-rich regions along human chromosomes, to quantify in situ differences between normal and malignant cells from peripheral blood as well as on tissue sections. The antibody is ideal for the histopathological analysis of tissue samples without employing DNA extraction procedures that destroy cells.

Application:

The Ab is effective in ELISA, immunoblotting (WB), immunoprecipitation (IP), immunohistochemistry (IHC), immunocytochemistry (ICC) and flow cytometry (FC).

Suggested Working Dilution*: (*The optimal Ab dilution should be determined for each specific assay condition)

WB: 1/500

IHC: 1/500

ICC: 1/500

IP: 1/50

Storage Conditions:
Store at -20°C

References*:*

Reynaud C & Niveleau A. (1990) Anal. Letters 23: 31-45.
Sasco AJ et al. (1996) Cancer Letters 108: 157-162.
Rougier N et al. (1998) Genes Dev. 14: 2108-2113
Habib M et al. (1999) Exp. Cel. Res. 249: 46-53.
Weber et al. (2005) Nat. Genet. 37: 853-862.