

DNMT1 Monoclonal Antibody

ORDERING INFORMATION

Catalog No.: 12595 (clone 4G11-C7)
Size: 100ug in PBS (2mg/ml), pH 7.4,
0.09% sodium azide. Purified by Protein
G affinity chromatography.

BACKGROUND

Methylation of DNA at cytosine residues is important in regulation of gene expression and genomic imprinting. Hyper-methylation of CpG islands in tumor suppressor genes or hypomethylation of bulk genomic DNA may be linked to development of cancer. Thus far three families of mammalian DNA methyl-transferase genes have been identified: DNMT1, DNMT2, and DNMT3. DNMT1 is constitutively expressed in proliferating cells, and inactivation of this gene causes global demethylation of genomic DNA and embryonic lethality. DNMT1 co-purifies with the retinoblastoma (Rb) tumor suppressor gene product E2F1 and with HDAC1. DNMT1 cooperates with Rb to repress transcription from promoters containing E2F-binding sites which suggests a link between DNA methylation, histone deacetylase and sequence-specific DNA binding activity as well as a growth-regulatory pathway that is disrupted in cancer cells.

SPECIFICATION SUMMARY

Antigen: Synthetic peptide
corresponding to aa 637-650 of human
DNMT1 (accession no. NP_001370).
Host Species: Mouse
Antibody Class: IgG2b

SPECIFICITY

This antibody recognizes human, mouse,
and Zebrafish DNMT1.

APPLICATIONS

ELISA

Immunoblotting: use at 2ug/ml. A band of
~190kDa is detected.

These are recommended concentrations;
enduser should determine optimal
concentrations for their applications.

Positive controls: ES and H1299 cell
lysates.

DILUTION INSTRUCTIONS

Dilute in PBS or medium which is identical
to that used in the assay system.

STORAGE AND STABILITY

This antibody is stable for at least one (1)
year at -20°C. Avoid repeated freeze-
thaw cycles.

*For in vitro investigational use only. Not
intended for diagnostic or therapeutic
applications.*