COSMO BIO CO., LTD.
Inspiration for Life Science

POLYCLONAL ANTIBODY

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Catalog No. BAM-70-201

Anti-Dnmt1 (1-248), affinity-purified

BACKGROUND

Dnmt1 (DNA (cytosine-5-)-methyltransferase 1) has a role in the establishment and regulation of tissue-specific patterns of methylated cytosine residues (epigenetics). Hypermethylation in promoter regions are associated with repression of the genes. Aberrant methylation patterns are associated with certain human tumors and developmental abnormalities. This antibody was raised by Prof. S. Tajima of Osaka Univ. and used in Ref.3

Product type	Primary antibodies
Host	Rabbit
Source	Serum
Form	Liquid
	1 mg/ml in PBS, 50% glycerol, 0.05% sodium azide (and trace of ammonium sulfate)
Volume	50ug
Concentration	1 mg/ml
Specificity	Reacts with Dnmt1 (1-248)
Antigen	Highly purified recombinant mouse Dnmt1 (amino acids 1-248)
Clone	
Isotype	

Application notes

WB, IP, IF Other applications were not tested

Recommended use

Immunoprecipitation: Especially good for native form of Dnmt1 and useful for analysis of the protein complex containing Dnmt1

Recommended dilutions

Western Blotting: 0.2～1 ug/ml

Optimal dilutions/concentrations should be determined by the end user.

Staining Pattern

Cross reactivity Mouse and human. Not tested with other species

Storage -20 °C (long period, -80°C)

References

This product was used in Ref. 3 and 4

1) Di Croce L, et al. (2002). Methyltransferase recruitment and DNA hypermethylation of target promoters by an oncogenic transcription factor. Science 295: 1079-82.

2) Rhee I, et al. (2002). DNMT1 and DNMT3b cooperate to silence genes in human cancer cells. Nature 416: 552-6.

3) Sharif K, Muto M, Takebayashi S, et al.(2007) The SRA protein Np95 mediates epigenetic inheritance by recruiting Dnmt1 to methylated DNA. Nature 450:908-12.

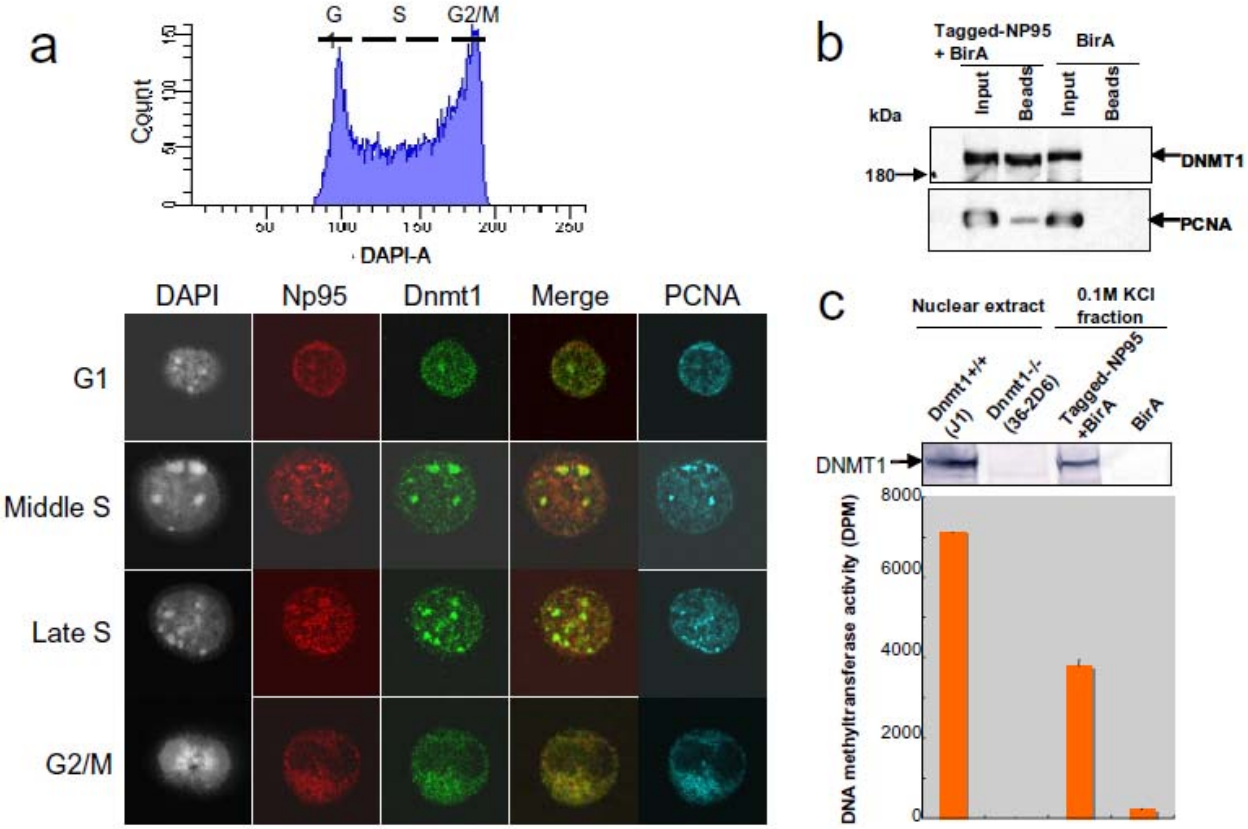

Figure. Use of anti-Dnmt1 (1-248) antibody for western blotting and immuno-fluorescence staining
a, Subnuclear localization of Dnmt1 (green), Np95 (red) and Pcna (blue) in mouse embryonic stem cells (E14) during cell-cycle progression (bottom).Merged images for Np95 and Dnmt1 are shown. Profile of DNA content in exponentially growing ECSs is shown (top) b, Association of Np95 with Dnmt1 and Pcna in HeLa cell nuclear extracts. Human NP95 was tagged by biotin-binding domain and stably expressed in HeLa cells together with the E. coli BirA biotin ligase gene. Biotylated Np95 was captured by streptoavidin beads. The captured proteins were eluted from the beads and analyzed by western bloting using antibodies against Dnmt1 and Pcna. c, Catalytic activity of NP95 associated Dnmt1 in HeLa cells. The presence of Dnmt1 in the NP95 complexes was confirmed by western blot and the DNA methyltransferase activity of the extracts was measured (The data were kindly provided by Dr. M. Muto of Riken Research Center for Allergy and Immunology)

Related products:
70-203 Anti-Dnmt1 (1037-1086) antibody, affinity-purified (rabbit polyclonal)
Especially good for immunoprecipitation of denatured Dnmt1 and useful for ChiP assays Cross-reacts with human, mouse and xenopus Dnmt1

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