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# 10-7002: Monoclonal Antibody to Dnmt1 (Clone: ABM13B2)

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| **Clonality :** | Monoclonal |
| **Clone Name :** | ABM13B2 |
| **Application :** | IHC,FACS,WB |
| **Reactivity :** | Mouse,Human |
| **Gene :** | DNMT1 |
| **Gene ID :** | 1786 |
| **Uniprot ID :** | P26358 |
| **Format :** | Purified |
| **Alternative Name :** | DNMT1,AIM,CXXC9,DNMT |
| **Isotype :** | Mouse IgG1 Kappa |
| **Immunogen Information :** | A partial length recombinant DNMT1 protein (amino acids 128-429) was used as the immunogen for this antibody. |

## Description

Dnmt1(DNA (cytosine-5-)-methyltransferase 1 ) is one of the most abundant DNA methyltransferase in mammalian tissues, where it associates with the replication machinery and restores symmetrical methylation at hemimethylated CpG sites generated by the semi-conservative DNA replication process. Dnmt1 comprises a regulatory N-terminal region and a C-terminal catalytic domain connected by a linker of seven glycine-lysine repeats. The N-terminal part contains a PCNA binding domain (PBD), a heterochromatin targeting sequence (TS), a CXXC-type zinc finger domain and two Bromo-Adjacent Homology domains (BAH1 and BAH2). The C-terminal domains of mammalian Dnmts contain all ten catalytic motifs identified in bacterial DNA (cytosine-5) methyltransferases. Dnmt1 maintains methylation patterns with high fidelity and is essential for embryonic development and genome integrity. The molecules interacting with Dnmt1, including RNA polymerase II, some RNA-binding proteins, and some specific Dnmt1-inhibitory RNA molecules are involved in chromatin organization, DNA repair, cell cycle regulation, and apoptosis.

## Product Info

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| **Amount :** | 25 µg / 100 µg |
| **Purification :** | Protein G Chromatography |
| **Content :** | 25 µg in 50 µl/100 µg in 200 µl PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic. |
| **Storage condition :** | Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid repeated freeze and thaw cycles. |

## Application Note

Western blot analysis: 2-4 µg/ml, Immunohistochemical analysis: 5 µg/ml, FACS analysis: 0.5 µg/10^6 cells

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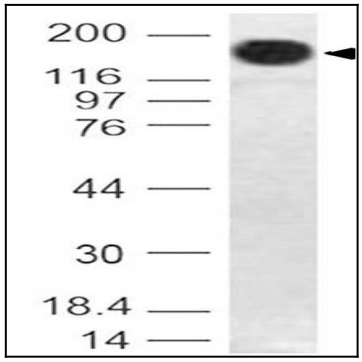


Fig-1: Western blot analysis of DNMT1. Anti- DNMT1 antibody (Clone: ABM13B2) was used at 2 µg/ml on mouse Embryonic liver lysate.

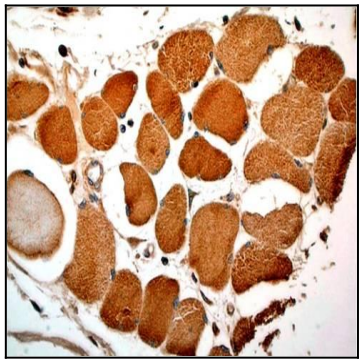

Fig-2 : Immunohistochemical analysis of Dnmt1 in human SKM tissue using Dnmt 1 antibody (Clone: ABM13B2) at 5 µg/ml.

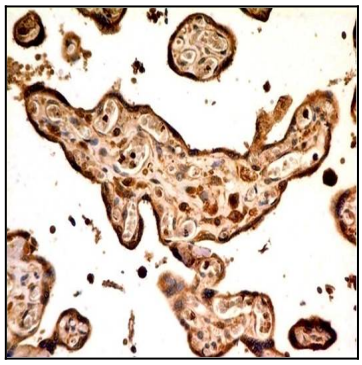

Fig-3 : Immunohistochemical analysis of Dnmt1 in human Placenta tissue using Dnmt 1 antibody (Clone: ABM13B2) at 5 µg/ml.

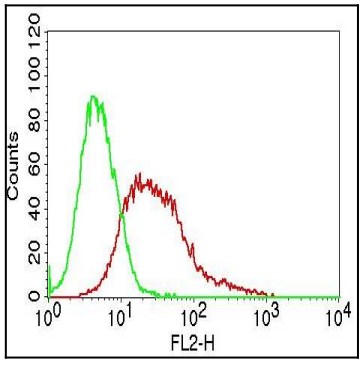


Fig-4: Intracellular flow analysis of Dnmt1 in Hek-293 cells using 0.5 µg/10^6 cells of Dnmt1 antibody (Clone: ABM13B2). Green represents isotype control; red represents anti-DNMT1 antibody. Goat anti-Mouse PE conjugate was used as secondary antibody.