

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

<b>Clonality :</b>	Monoclonal
<b>Clone Name :</b>	ABM13B2
<b>Application :</b>	IHC,FACS,WB
<b>Reactivity :</b>	Mouse,Human
<b>Gene :</b>	DNMT1
<b>Gene ID :</b>	1786
<b>Uniprot ID :</b>	P26358
<b>Format :</b>	Purified
<b>Alternative Name :</b>	DNMT1,AIM,CXXC9,DNMT
<b>Isotype :</b>	Mouse IgG1 Kappa
<b>Immunogen Information :</b>	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

<b>Amount :</b>	25 µg / 100 µg
<b>Purification :</b>	Protein G Chromatography
<b>Content :</b>	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.
<b>Storage condition :</b>	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<sup>6</sup> cells

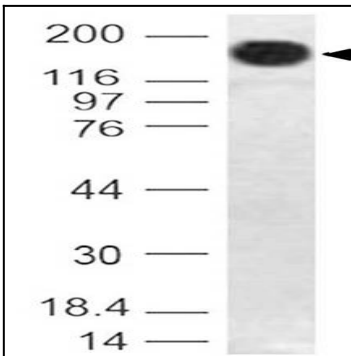


Fig-1: Western blot analysis of DNMT1. Anti- DNMT1 antibody (Clone: ABM13B2) was used at 2  $\mu\text{g/ml}$  on mouse Embryonic liver lysate.

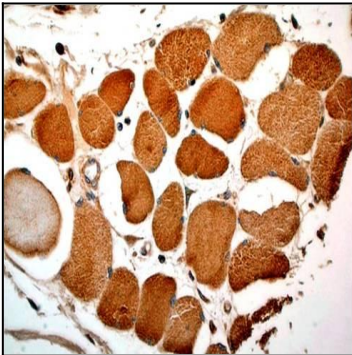


Fig-2 : Immunohistochemical analysis of Dnmt1 in human SKM tissue using Dnmt 1 antibody (Clone: ABM13B2) at 5  $\mu\text{g/ml}$ .

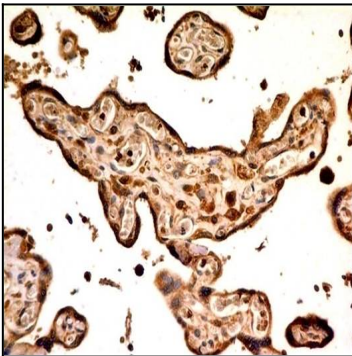


Fig-3 : Immunohistochemical analysis of Dnmt1 in human Placenta tissue using Dnmt 1 antibody (Clone: ABM13B2) at 5  $\mu\text{g/ml}$ .

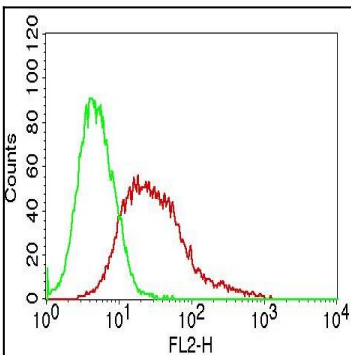


Fig-4: Intracellular flow analysis of Dnmt1 in Hek-293 cells using 0.5  $\mu\text{g}/10^6$  cells of Dnmt1 antibody (Clone: ABM13B2). Green represents isotype control; red represents anti-DNMT1 antibody. Goat anti-Mouse PE conjugate was used as secondary antibody.