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

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

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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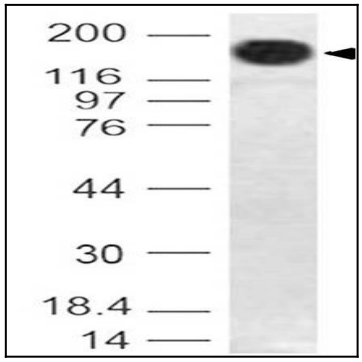


Fig-1: Western blot analysis of DNMT1. Anti- DNMT1 antibody (Clone: ABM13B2) was used at 2 µg/ml on mouse Embryonic liver lysate.

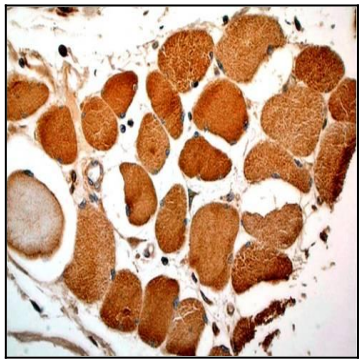


Fig-2 : Immunohistochemical analysis of Dnmt1 in human SKM tissue using Dnmt 1 antibody (Clone: ABM13B2) at 5 µg/ml.

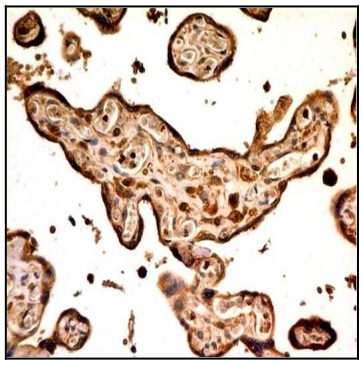


Fig-3 : Immunohistochemical analysis of Dnmt1 in human Placenta tissue using Dnmt 1 antibody (Clone: ABM13B2) at 5 µg/ml.

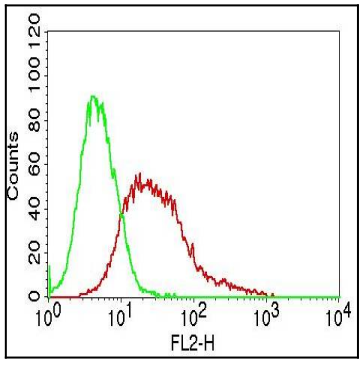


Fig-4: Intracellular flow analysis of Dnmt1 in Hek-293 cells using 0.5 µg/10^6 cells of Dnmt1 antibody (Clone: ABM13B2). Green represents isotype control; red represents anti-DNMT1 antibody. Goat anti-Mouse PE conjugate was used as secondary antibody.

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