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**Box 1 | Basic Info**

|                         |               |
|-------------------------|---------------|
| <b>Cat. No.</b>         | ABP-PAB-10483 |
| <b>Animal ID</b>        | RB1851-1852   |
| <b>Host</b>             | Rabbit        |
| <b>Reactivity</b>       | Human         |
| <b>Format</b>           | Purified      |
| <b>Accession number</b> | NM_022552     |
| <b>Amount</b>           | 100 µg        |

**Alternative Name(s):** DNA (cytosine-5)-methyltransferase 3 alpha, Dnmt3a

**References:**

1. Weisenberger DJ, Velicescu M, Preciado-Lopez MA, Gonzales FA, Tsai YC, Liang G, Jones PA: Identification and characterization of alternatively spliced variants of DNA methyltransferase 3a in mammalian cells. *Gene* 298(1): 91-99 (2002).
2. Kim GD, Ni J, Kelesoglu N, Roberts RJ, Pradhan S: Co-operation and communication between the human maintenance and de novo DNA (cytosine-5) methyltransferases. *EMBO J.* 21(15): 4183-4195 (2002).
3. Chen T, Ueda Y, Xie S, Li E: A novel Dnmt3a isoform produced from an alternative promoter localizes to euchromatin and its expression correlates with active de novo methylation. *J. Biol. Chem.* 277(41): 38746-38754 (2002).
4. Di Croce L, Raker VA, Corsaro M, Fazi F, Fanelli M, Faretta M, Fuks F, Lo Coco F, Kouzarides T, Nervi C, Minucci S, Pelicci PG: Methyltransferase recruitment and DNA hypermethylation of target promoters by an oncogenic transcription factor. *Science* 295 (5557): 1079-1082 (2002).
5. Xie S, Wang Z, Okano M, Nogami M, Li Y, He WW, Okumura K, Li E: Cloning, expression and chromosome locations of the human DNMT3 gene family. *Gene* 236 (1): 87-95 (1999).
6. Robertson KD, Uzvolgyi E, Liang G, Talmadge C, Sumegi J, Gonzales FA, Jones PA: The human DNA methyltransferases (DNMTs) 1, 3a and 3b: coordinate mRNA expression in normal tissues and overexpression in tumors. *Nucleic Acids Res.* 27 (11): :2291-2298 (1999).
7. Okano M, Xie S, Li E: Cloning and characterization of a family of novel mammalian DNA (cytosine-5) methyltransferases. *Nat. Genet.* 19(3): :219-220 (1998).

# DNMT3A, DNA (cytosine-5)-methyltransferase 3 alpha polyclonal antibody

DNA methylation plays an important role in animal development and gene regulation. In mammals, several genes encoding DNA cytosine methyltransferases (DNMTs) have been identified. DNMT1 is constitutively expressed and is required for the maintenance of global methylation after DNA replication. In contrast, the murine Dnmt3 family genes appear to be developmentally regulated and behave like de novo DNA methyltransferases in vitro. The human de novo enzymes hDNMT3a and hDNMT3b form complexes with the major maintenance enzyme hDNMT1.

**Buffers**

Purified rabbit polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column and eluted out with both high and low pH buffers and neutralized immediately after elution then followed by dialysis against PBS.

**Immunogen**

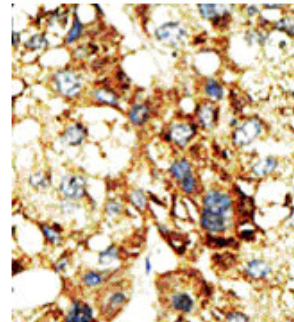
KLH conjugated synthetic peptide comprised of amino acids 472 - 487 [DERTRERLVYEVQRKQC] of the human DNA (cytosine-5)-methyltransferase 3 alpha (DNMT3A) protein.

**Application:**

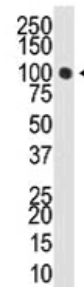
Tested by peptide-specific ELISA (1:1,000). WB (1:100 ~1:500), IHC (1:50 ~1:100)

**Storage:**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C. Avoid repeated freeze-thaw cycles.



Human Hepatocarcinoma



WB analysis of T47-D cell lysate