

**Dnmt3L Antibody**  
**DNMT3L Antibody, Clone S117-9**  
**Catalog # ASM10217**

**Specification**

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**Dnmt3L Antibody - Product Information**

Application	<b>IHC, WB</b>
Primary Accession	<a href="#">O9UJW3</a>
Other Accession	<a href="#">NP_037501.2</a>
Host	<b>Mouse</b>
Isotype	<b>IgG1</b>
Reactivity	<b>Human, Mouse</b>
Clonality	<b>Monoclonal</b>

**Description**

Mouse Anti-Human Dnmt3L Monoclonal IgG1

**Target/Specificity**

Detects ~45kDa. No cross-reactivity against DNMT3a or DNMT3B.

**Other Names**

Cytosine 5 methyltransferase 3 like protein antibody, DNA (cytosine 5 ) methyltransferase 3 like antibody, DNA (cytosine-5)-methyltransferase 3-like antibody, DNA cytosine 5 methyltransferase 3 like protein antibody, DNA methyltransferase 3 like protein antibody, DNM3L\_HUMAN antibody, Dnmt 3L antibody, Dnmt3l antibody, Human cytosine 5 methyltransferase 3 like protein antibody, MGC1090 antibody

**Immunogen**

Fusion protein amino acids 1-387 of human DNMT3L

**Purification**

Protein G Purified

Storage **-20°C**

**Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C**

**Certificate of Analysis**

1 µg/ml of SMC-341 was sufficient for detection of DNMT3L in 10 µg of COS cell transiently transfected with Flag-tagged DNMT3L lysate by colorimetric immunoblot analysis using goat anti-mouse IgG:HRP as the secondary antibody.

**Cellular Localization**

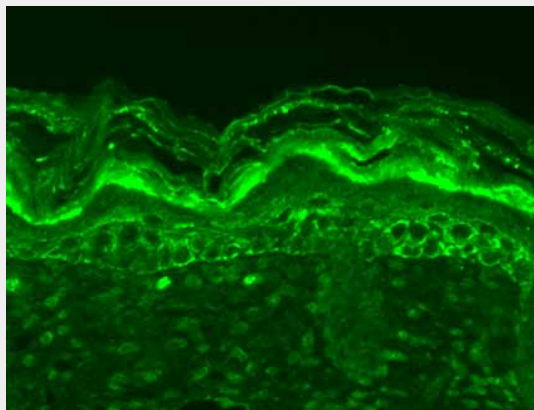
Nucleus

**Dnmt3L Antibody - Protocols**

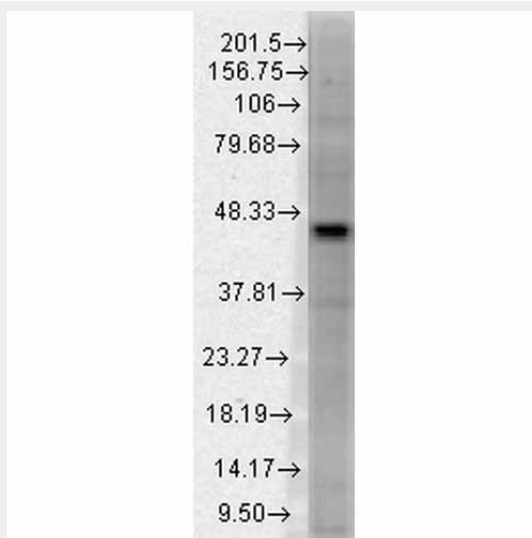
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

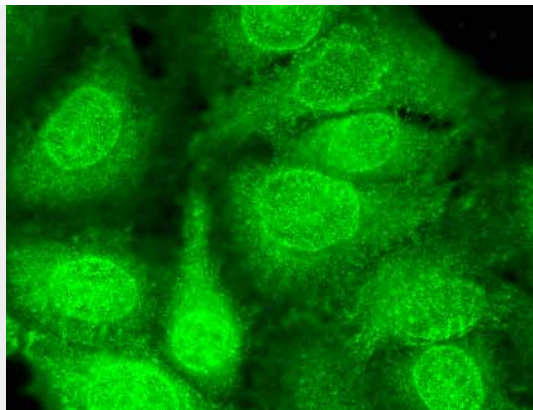
### Dnmt3L Antibody - Images



Immunohistochemistry analysis using Mouse Anti-Dnmt3L Monoclonal Antibody, Clone S117-9 (ASM10217). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Dnmt3L Monoclonal Antibody (ASM10217) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Lower layers of the epidermis have positive cell staining in the cytoplasm.



Western Blot analysis of Human tissue lysate showing detection of Dnmt3L protein using Mouse Anti-Dnmt3L Monoclonal Antibody, Clone S117-9 (ASM10217). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Dnmt3L Monoclonal Antibody (ASM10217) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Dnmt3L Monoclonal Antibody, Clone S117-9 (ASM10217). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at  $-20^{\circ}\text{C}$ . Primary Antibody: Mouse Anti-Dnmt3L Monoclonal Antibody (ASM10217) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Staining in the nucleus, and accumulated around the nucleus. Clear nuclear demarcations.

### **Dnmt3L Antibody - Background**

Methylation of DNA at cytosine residues plays an important role in regulation of gene expression, genomic imprinting and is essential for mammalian development. Hypermethylation of CpG islands in tumor suppressor genes or hypomethylation of bulk genomic DNA may be linked with development of cancer. To date, 3 families of mammalian DNA methyltransferase genes have been identified which include Dnmt1, Dnmt2 and Dnmt3. Dnmt1 is constitutively expressed in proliferating cells and inactivation of this gene causes global demethylation of genomic DNA and embryonic lethality. Dnmt2 is expressed at low levels in adult tissues and its inactivation does not affect DNA methylation or maintenance of methylation. The Dnmt3 family members, Dnmt3a and Dnmt3b, are strongly expressed in ES cells but their expression is down regulated in differentiating ES cells and is low in adult somatic tissue (1-6). Studies show that DNMT3L regulates the activity of DNMT3A and DNMT3B and stimulates their catalytic activities (7). DNMT3L has specifically been linked to the process of carcinogenesis, thru its role in nuclear programming (8).

### **Dnmt3L Antibody - References**

1. Bestor T., et al.(1988) J.Mol. Biol. 203: 971-983.
2. Yen R.W., Vertino P.M., Nelkin B.D. et al. (1992) Nucl. Acids Res. 20: 2287-2291.
3. Xie S. et al. (1999) Gene 236: 87-95.
4. Okano M., Bell D.W., Haber D.A. and Li E. (1999) Cell 99: 247-257.
5. Reik W. et al. (1999) J. Nat. Genet 23: 380-382.
6. Robertson K.D., et al. (2000) Nat Genet 25(3):338-342.
7. Kareta MS., et al. (2006) J Biol Chem. 281(36): 25893-25902.
8. Gokul G., Ramakrishna G., and Khosla S. (2009) Epigenetics. 4(5): 322-329.