



Product Specification Sheet

**DNA 5-cytosine methyltransferase 3a (Dnmt3a) Antibodies**

Cat. # DNMT31-A

Goat Anti-human DNMT3a IgG

**SIZE:** 500 ul

Methylation at the 5'-position of cytosine is the only known naturally occurring covalent modification of the mammalian genome. DNA methylation requires the enzymatic activity of DNA 5-cytosine methyltransferase (Dnmt) proteins, which catalyze the transfer of a methyl group from S-adenosyl methionine to the 5'-position of cytosines residing in the dinucleotide CpG motif, and this methylation results in transcriptional repression of the target gene. The Dnmt enzymes are encoded by independent genes. Dnmt1 is the most abundant, and it preferentially methylates hemimethylated DNA and coordinates gene expression during development. Additional mammalian Dnmt proteins include Dnmt2 and Dnmt3. Dnmt2 lacks the large N-terminal regulator domain of Dnmt1, is expressed at substantially lower levels in adult tissues, and is likely involved in methylating newly integrated retroviral DNA. Dnmt3a and Dnmt3b are encoded by two distinct genes, but both are abundantly expressed in embryonic stem cells, where they also methylate CpG motifs on DNA.

**Source of Antigen and Antibodies**

<b>Antigen</b>	15-aa peptide from the c-terminus of human DNMT3a (protein accession #Q9Y6K1) conjugated to KLH
<b>Antibody host/type</b>	Goat, polyclonal affinity purified IgG, <b>Cat # DNMT31-A</b>
<b>Secondary Ab</b>	<b>Rabbit Anti-goat IgG-HRP conjugate</b> Cat # SA-30220 (AP, biotin, FITC conjugates also available)
<b>Negative Control Ab</b>	# SA-20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Form & Storage**

**Aff Pure (purified)**

100 ug/500vial  
 solution, PBS pH 7.5, 0.1% gelatin, 0.05% azide  
 lyophilized powder

**Reconstitute powder** in 500 ul water to prepare 200 ug/ml stock.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** 1-5 ug/ml using ECL. mol wt 100-130 kda using HeLa Cell lysates.

**ELISA** 0.1-1 ug/ml as detecting antibody.

**Histochemistry:** We recommend the use of 2-10 ug/ml of antibody in paraformaldehyde-fixed, paraffin embedded sections.

**Immunoneutralization**

BDNF11-M will neutralize the biological activity of recombinant human BDNF. Antibody concentration must be optimized for each application under defined experimental conditions.

**Specificity & Cross-reactivity**

Anti-human DMT3a reacts with mouse, rat, and human DNMT3a proteins. Antibody crossreactivity in various species is not established.

**General References:** Hsieh CL (1999) Mol Cell Biol. 19, 8211-8218; Wash CP (1999) Genet. develop. 13, 26-34; kanao M (1998) Nucl. Acid. Res. 26, 2536

\*This product is for In vitro research use only.

**Related material available from GSI**

Ant-NGF, NT-3, NT-4, BDNF, Trk receptors, EGF, FGF and other growth factors

DNMT31-A

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