

## Recombinant DNMT3A / DNMT3L Complex

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**Catalog No:** 31415, 31815

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.65 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant DNMT3A / DNMT3L Complex is supplied at a concentration of 0.65 µg/µl in 25 mM Hepes pH 7.5, 300 mM NaCl, 5% Glycerol, 0.04% Triton X-100, 0.2 mM TCEP and 0.2 mg/ml 3× Flag peptide.

**Background:** DNA methyltransferase proteins such as DNMT3A are involved in DNA methylation, in which a methyl group is added to a cytosine residue on DNA, commonly at the C5 position of a CpG dinucleotide. DNMT3A has been shown to be important in the regulation of specific patterns of DNA methylation. Methylation of mammalian DNA has long been recognized to play a major role in a number of cellular functions such as embryonic development, genetic imprinting, X chromosome inactivation and control of gene expression. DNA methylation is generally associated with transcriptional repression.

Three families of DNMTs have been identified: DNMT1, DNMT2 and DNMT3. The DNMT3 family, containing two active methyltransferases, DNMT3A & DNMT3B, and one DNMT3-Like protein (DNMT3L), establishes the initial CpG methylation pattern de novo and shows the same propensity for methylating unmethylated duplex DNA as for hemimethylated DNA. DNMT3A and DNMT3B are encoded by two distinct genes and are strongly expressed in embryonic stem cells. DNMT3A is ubiquitous in mammalian cells. DNMT3L is a nuclear protein with similarity to the DNMT family of proteins, but does not function as a DNA methyltransferase. It serves as an essential regulator of DNMT3A and DNMT3B, recruiting them to sites for deposition of de novo DNA methylation.

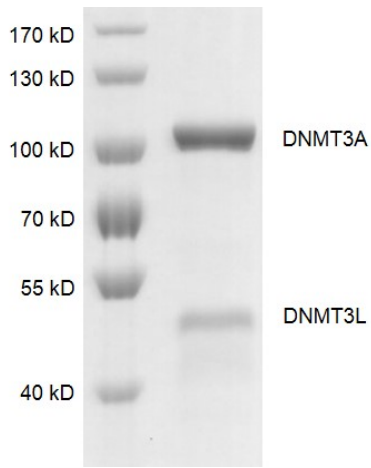
**Protein Details:** Recombinant DNMT3A / DNMT3L Complex that includes human DNMT3A amino acids 214-912 (accession number NP\_783328.1) with an N-terminal 6×His and Flag tag and full length DNMT3L (accession number NP\_787063.1) with an N-terminal 6×His tag was expressed in Sf9 cells. The molecular weights of DNMT3A and DNMT3L are 83.8 kDa and 46.6 kDa, respectively. The recombinant protein is >95% pure by SDS-PAGE.

**Application Notes:** Recombinant DNMT3A / DNMT3L Complex is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

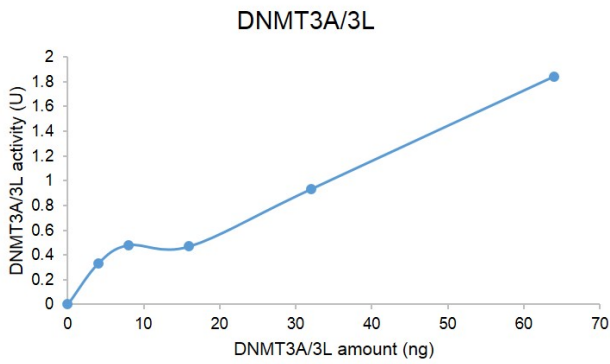
**DNMT Activity Assay Conditions:** Assay was performed using DNMT Activity / Inhibition Assay, Active Motif Catalog No. 55006, for 1 hour at 37°C.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



**Recombinant DNMT3A / DNMT3L Complex gel**  
Recombinant DNMT3A / DNMT3L Complex was run on an 8% SDS-PAGE gel and stained with Coomassie blue.



**Recombinant DNMT3A / DNMT3L Complex activity assay**  
Recombinant DNMT3A / DNMT3L Complex activity was measured using DNMT Activity / Inhibition Assay, Active Motif Catalog No. 55006, for 1 hour at 37°C