# Data Sheet (Cat.No.TMPC-00239)

TargetMol

## DNMT3A Protein, Human, Recombinant (GST)

### General Information

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| Protein Construction: | Recombinant full length human DNMT3A was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. |
| Species: | Human |
| Expression Host: | Baculovirus-Insect Cells |
| Accession: | Q9Y6K1 |
| Molecular Weight: | ~162 kDa |

### QC Testing

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| Biological Activity: | Representative specific activity data for DNMT3A were obtained using different assay formats:<br>- 215 nmol/min/mg, determined by radioactive kinase assay<br>- 402 nmol/min/mg, determined by MTase-Glo methyltransferase assay<br>Different lots may be tested using different assay methods; therefore, values obtained using different assay formats are not directly comparable. |
| Purity: | >75% as determined by SDS-PAGE. |
| Formulation: | Supplied as sterile 50 mM Tris-HCl, pH 7.5, 50 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol. |

### Preparation and Storage

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.

### Protein Background

DNMT3A, as de novo DNA methyltransferase, is essential for regulating gene expression through cellular development and differentiation. The functions of DNMT3A rely on its oligomeric states and allosteric regulations between its catalytic domain and binding partners. The DNMT3A R882H mutation is frequently observed in acute myeloid leukemia (AML). It is located in the subunit and DNA binding interface of DNMT3A and has been reported to cause a reduction in activity and dominant negative effects. DNMT3A regulation of miR-200b controls cardiac fibroblast autophagy during cardiac fibrosis and provide a basis for the development of therapies for cardiac fibrosis. DNMT3A variants are present in elderly healthy individuals and patients with AML in complete remission,

which suggests that DNMT3A mutations may contribute to pre-leukemic clonal hematopoiesis.



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