# Data Sheet (Cat.No.TMPY-01284)

TargetMol

## METTL11A Protein, Human, Recombinant (GST)

### General Information

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| Synonyms: | C9orf32;AD-003;METTL11A;HOMT1A;N-terminal Xaa-Pro-Lys N-methyltransferase 1;NTM1A;NRMT |
| Protein Construction: | A DNA sequence encoding the human METTL11A (NP_054783.2) (Thr 2-Arg 223) was fused with the GST tag at the N-terminus. Predicted N terminal: Met |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | Q9BV86 |
| Molecular Weight: | 52.2 kDa (predicted); 48 kDa (reducing conditions) |

### QC Testing

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| Biological Activity: | Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity: | > 85 % as determined by SDS-PAGE |
| Endotoxin: | Please contact us for more information. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM tris 150 mM NaCl, 0.5 mM GSH 10% glycerol, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

### Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Methyltransferase-like protein 11A, also known as METTL11A, is a member of the methyltransferase superfamily and METTL11 family. Methyltransferase is a type of transferase enzyme which transfers a methyl group from a donor to an acceptor. Methylation often occurs on nucleic bases in DNA or amino acids in protein structures. Methyltransferase uses a reactive methyl group bound to sulfur in S-adenosyl methionine (SAM) as the methyl

donor. DNA methylation is often utilized to silence and regulate genes without changing the original DNA sequence. This methylation occurs on cytosine residues. DNA methylation may be necessary for normal growth from embryonic stages in mammals. Methylation can serve to protect DNA from enzymatic cleavage since restriction enzymes are unable to bind and recognize externally modified sequences. This is especially useful in bacterial restriction-modification systems which use restriction enzymes to cleave foreign DNA while keeping their DNA protected by methylation. Methylation of amino acids in the formation of proteins leads to more diversity of possible amino acids and therefore more diversity of function. The methylation reaction occurs on nitrogen atoms either on the N terminus or side-chain position of the protein and is usually irreversible.

Reference

Hu R.-M., et al.,(2000), Gene expression profiling in the human hypothalamus-pituitary-adrenal axis and full-length cDNA cloning. Proc. Natl. Acad. Sci. U.S.A. 97:9543-9548.

Ota T., et al., (2004), Complete sequencing and characterization of 21,243 full-length human cDNAs.Nat. Genet. 36:40-45.

Humphray S.J., et al.,(2004), DNA sequence and analysis of human chromosome 9.Nature 429:369-374.



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