

Store at
-20°C
#69159**N6-mA Methyltransferase Antibody
Sampler Kit**
Orders: 877-616-CELL (2355)
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1 Kit (4 x 20 microliters)

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
METTL3 (D2I6O) Rabbit mAb	96391	20 µl	70 kDa	Rabbit IgG
METTL14 (D8K8W) Rabbit mAb	51104	20 µl	65 kDa	Rabbit IgG
Virilizer (D4N8B) Rabbit mAb	88358	20 µl	210 kDa	Rabbit IgG
WTAP Antibody	56501	20 µl	55 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The N6-mA Methyltransferase Antibody Sampler Kit provides an economical means of detecting N6-mA methyltransferase proteins using control antibodies against METTL3, METTL14, WTAP, and Virilizer. The kit contains enough primary antibodies to perform at least two western blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Methyltransferase-like protein 3 (METTL3) and methyltransferase-like protein 14 (METTL14) are the two catalytic subunits of an N6-methyltransferase complex that methylates adenosine residues in RNA (1). Methylation of adenosine residues regulates mRNA splicing, processing, translation efficiency, editing and stability, in addition to regulating primary miRNA processing, and is critical for proper regulation of the circadian clock, embryonic stem cell self-renewal, immune tolerance, response to various stimuli, meiosis and mouse fertility (2,3). In this complex, METTL3 functions as the catalytic methyltransferase subunit and METTL14 functions as the target recognition subunit by binding to RNA (4). In addition, the Wilms' tumor 1-associating protein (WTAP) functions as a regulatory subunit and is required for accumulation of the complex to nuclear speckles, which are sites of RNA processing (5). Several studies suggest a role for this complex in cancer. METTL3 expression is elevated in lung adenocarcinoma where it promotes growth, survival, and invasion of human lung cancer cells (6). In addition, WTAP is overexpressed in a number of different cancers and positively regulates cell migration and invasion in glioblastoma and cholangiocarcinoma (7,8).

Virilizer is an additional protein subunit of the METTL3/METTL14 N6-methyltransferase complex and is required for methyltransferase activity (9). As part of the WTAP complex, Virilizer functions to regulate sex determination in *Drosophila melanogaster* through splicing of Sex-lethal (Sxl) mRNA transcripts (10,11).

Background References

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