

1-Methyladenosine (m1A) ELISA Kit | m1A elisa kit

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CATALOG #

AAA44670

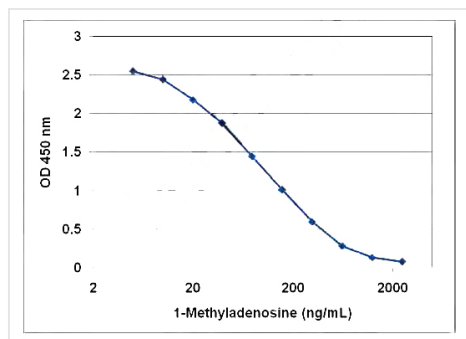
PRODUCT SYNONYMS

1-Methyladenosine (m1A); 1-Methyladenosine (m1A) ELISA Kit; m1A elisa kit

PRODUCT SPECIFICATIONS

Assay Type	Quantitative Competitive
Preparation and Storage	Upon receipt, aliquot and store the Anti-1-Methyladenosine Antibody and the m1A Standard at -20 degree C and the m1A Conjugate at -80 degree C to avoid multiple freeze/thaw cycles. Store all other components at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for m1A elisa kit	Background: Modifications to ribonucleic acids (RNAs) are integrally involved in the function, integrity, metabolism, and biosynthesis of RNA molecules. There are over 100 RNA modifications that have been discovered with the majority occurring in transfer RNA (tRNA), but they can also be found in ribosomal RNA (rRNA), small nuclear RNA (snRNA), messenger (mRNA), and long non-coding RNA (ncRNA). Urinary excretion of modified nucleosides has been linked to a variety of cancers, AIDS, and other malignant disease states. 1-methyladenosine (m1A) is a prominent reversible post-transcriptional RNA modification that influences the function and structure of tRNA and rRNA. 1-Methyladenosine occurs at positions 9, 14, and 58 of tRNA, with position 58 (m1A58) being important to tRNA stabilization. Methyltransferases catalyze the addition of a methyl group to the first position nitrogen on the adenosine base structure, resulting in the addition of a positive charge to the molecule. The reaction is reversible with demethylases such as ALKBH3. 1-methyladenosine can affect ribosomal biogenesis, antibiotic resistance in bacteria, react to environmental stress in tRNA, and interfere with Watson-Crick base pairing, which ultimately affects reverse transcription and protein translation. Urine samples of cancer, rheumatoid arthritis, and AIDS patients have all demonstrated high levels of m1A, which supports its role as a functional detection biomarker. Elevated serum levels of 1- methyladenosine have been detected under stress conditions. Recent 1- methyladenosine research is uncovering new roles and mechanisms involving 1-methyladenosine. While m1dA in DNA is considered a form of damage leading to genomic mutations, and thus requiring repair, endogenous enzymes proliferate the m1A modification in RNA. The m1A at position 9 (m1A9) is known to stabilize the canonical cloverleaf motif in tRNA. In addition, the m1A58 of tRNA is present in all eukaryotic types which may imply it is vital to molecular structure and stability. While 1-methyladenosine has been identified as an early malignant disease marker, its complete role as a modified nucleoside has yet to be elucidated. The 1-Methyladenosine (m1A) ELISA Kit is a competitive enzyme immunoassay developed for rapid detection and quantitation of 1-methyladenosine in urine, serum, or plasma samples. The quantity of 1-methyladenosine in unknown samples is determined by comparing its absorbance with that of a known 1-methyladenosine standard curve. The kit has a 1-methyladenosine detection sensitivity of approximately 2 ng/mL. Each kit provides sufficient reagents to perform up to 96 assays, including standard curve and unknown samples. Principle of the Assay: The 1-Methyladenosine (m1A) ELISA kit is a competitive ELISA for the quantitative measurement 1- methyladenosine (m1A). The unknown 1-methyladenosine samples or 1-methyladenosine standards are first added to a 1-methyladenosine-BSA conjugate preabsorbed microplate. After a brief incubation, an anti-1-methyladenosine monoclonal antibody is added, followed by an HRP conjugated secondary antibody. The 1-methyladenosine content in unknown samples is determined by comparison with predetermined 1- methyladenosine standard curve.
Product Categories/Family for m1A elisa kit	Metabolism Research; Nucleic Acid Metabolism

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/elisa-kits/1-methyladenosine-m1a/44670>