

## Glutamate Assay Kit

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CATALOG #  
**AAA44631**

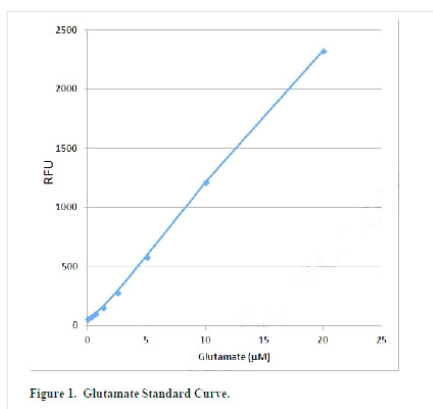
### PRODUCT SYNONYMS

Glutamate; Glutamate Assay Kit; Glutamate assay kit

### PRODUCT SPECIFICATIONS

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|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assay Type              | Quantitative Competitive                                                                                                                                                                                       |
| Preparation and Storage | Upon receipt, store the 10X Assay Buffer at 4 degree C. Aliquot and store all other components at -20 degree C<br>Avoid multiple freeze/thaw cycles<br>ADHP is light sensitive and must be stored accordingly. |

### IMAGES



Standard Curve (Sample)

## ADDITIONAL INFORMATION

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| <b>Related Product Information for<br/>Glutamate assay kit</b> | <p>Principle of the Assay: The Global DNA Methylation ELISA Kit is a competitive ELISA for the quantitative measurement of 5MedCyd. The unknown 5MedCyd samples or 5MedCyd standards are first added to the 5MedCyd DNA Conjugate Plate. After a brief incubation, an Anti-5MedCyd monoclonal antibody is added, followed by an HRP conjugated secondary antibody. The 5MedCyd content in unknown samples is determined by comparison with a predetermined 5MedCyd standard curve!!Background/Introduction: Epigenetic changes refer to stable, heritable, and reversible modifications. DNA methylation is one such epigenetic change and has been shown to be associated with almost every biological process. DNA methylation can increase the functional complexity of prokaryotic and eukaryotic genomes by providing additional avenues for the control of cellular processes. DNA methylation is also dynamic and thus can control the timing of cellular events. In prokaryotes, DNA methylation occurs at the C-5 or N-4 positions of cytosine, as well as the N-6 position of adenine. Multiple enzymes that are capable of methylating bacterial DNA have been identified and are named DNA-MTases. Initially, DNA methylation in bacteria was reported to be associated with restriction-modification systems, wherein foreign DNA that lacks DNA methylation can be recognized and degraded by host methylation-sensitive restriction enzymes. Further studies in bacteria also implicated DNA methylation in the maintenance of the DNA replication fidelity, gene expression regulation, and virulence. In plants, DNA methylation is found in the sequence context of CpG or CpNpG and has been implicated in normal plant development and regulation of transcription and transposition. At least two classes of DNA methyltransferases (DNMTs) have been identified and characterized in plants. These include the MET1 family of methyltransferases, which preferentially methylate cytosine in CpG context and function both as de novo and maintenance DNMTs, and a second class of DNMTs, named chromomethylases (CMTs), which are unique to plants and methylate cytosine in a CpNpG sequence context. In mammalian cells, DNA methylation is predominantly found at CpG dinucleotides, most of which reside within gene promoter regions, but in some instances, such as in the case of mouse and human embryonic stem cells, DNA methylation can also be found in non-CpG contexts. DNA methylation in mammalian cells is associated with repression of transcription and maintenance of genomic stability. Due to its important role in genome maintenance and other biological processes, deregulation of DNA methylation is associated with multiple human diseases including cancer. Three major enzymes are required for either de novo methylation (DNMT3A and DNMT3B) or maintenance methylation (DNMT1) in mammalian cells. There are several methods of detecting total 5-methylcytosine content in the genome. DNA can be digested into single nucleotides and total genomic 5-methylcytosine can be quantitated by high performance liquid chromatography, thin-layer chromatography, or liquid chromatography/mass spectroscopy, but all of these methods are labor intensive and technically demanding. MBS's Global DNA Methylation ELISA Kit is a competitive enzyme immunoassay developed for rapid detection and quantitation of 5'-methyl-2'-deoxycytidine (5MedCyd) in urine directly, or extracted cell or tissue DNA samples. The quantity of 5MedCyd in an unknown sample is determined by comparing its absorbance with that of a known 5MedCyd standard curve. The kit has a 5MedCyd detection sensitivity range of 300 nM to 40,000 nM. Each kit provides sufficient reagents to perform up to 96 assays, including standard curve and unknown samples.</p> |
| <b>Product Categories/Family for<br/>Glutamate assay kit</b>   | <b>Metabolism Research; Amino Acid Metabolism; Glutamate Assay Kit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**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://www.aaabiotech.com/assay-kits/glutamate/44631>