

# Global RNA Methylation Assay Kit (5 Methyl Cytosine, Fluorometric) ab233492

2 Images

Overview

Product name	Global RNA Methylation Assay Kit (5 Methyl Cytosine, Fluorometric)
Detection method	Fluorescent
Assay type	Quantitative
Product overview	Global RNA Methylation Assay Kit (5 Methyl Cytosine, Fluorometric) (ab233492) contains all reagents necessary for the quantification of global 5-mC RNA methylation. In the assay, RNA is bound to strip-wells that are specifically treated to have a high nucleic acid affinity. 5-mC in RNA is detected using capture and detection antibodies and then quantified fluorometrically by reading the fluorescence in a microplate spectrophotometer. The percentage of 5-mC RNA is proportional to the fluorescence intensity measured.

Notes	5-methylcytosine (5-mC) in DNA occurs by the covalent addition of a methyl group at the 5-carbon of the cytosine ring by DNA methyltransferases. This process has been well studied and is generally associated with repression of gene expression. It was also observed that in humans, 5-mC occurs in various RNA molecules including tRNAs, rRNAs, mRNAs and non-coding RNAs (ncRNAs). 5-mC seems to be enriched in some classes of ncRNA, but relatively depleted in mRNAs. Levels of 5-mC are variable in animal genomes, ranging from undetectable amounts in some insects to about 0.1-0.45% of total RNA in human cells. The majority (83%) of 5-mC sites were found in mRNAs. Within these transcripts 5-mC appears to be depleted within protein coding sequences but enriched in 5' and 3' UTRs. Two different methyltransferases, NSUN2 and Dnmt2 are known to catalyze 5-mC modification in eukaryotic RNA. There has been strong evidence that RNA cytosine methylation affects the regulation of various biological processes such as RNA stability and mRNA translation. Furthermore, loss of 5-mC in vault RNAs causes aberrant processing into Argonaute-associated small RNA fragments that can function as microRNAs. Thus, impaired processing of vault ncRNA may contribute to the etiology of human disorders related to NSun2-deficiency.
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Platform	Microplate reader
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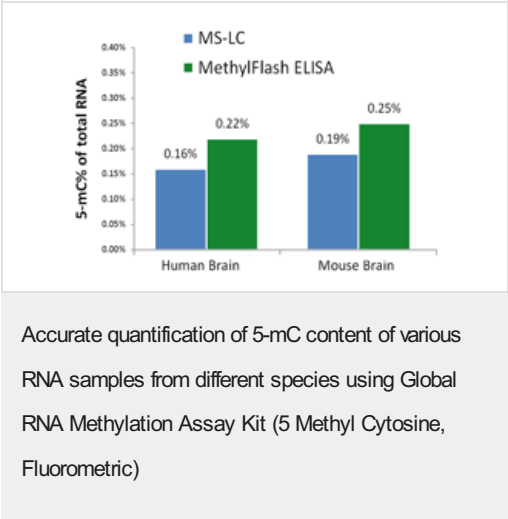
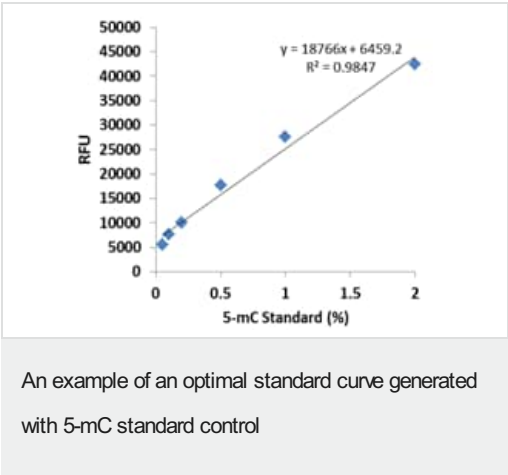
Properties

Storage instructions	Please refer to protocols.
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Components	1 x 48 tests	1 x 96 tests
10X Wash Buffer	1 x 14ml	1 x 28ml
5-mC Antibody, 1000X	1 x 5µl	1 x 10µl

Components	1 x 48 tests	1 x 96 tests
8-Well Assay Strips (With Frame)	1 x 6 units	1 x 12 units
Binding Solution	1 x 5ml	1 x 10ml
Dilution buffer	1 x 5ml	1 x 10ml
Enhancer Solution, 1000X	1 x 5µl	1 x 10µl
Fluoro Developer	1 x 12µl	1 x 24µl
Fluoro Enhancer	1 x 12µl	1 x 24µl
Negative Control containing 0% 5-mC, 100 µg/ml	1 x 50µl	1 x 100µl
Positive Control containing 2% 5-mC, 100 µg/ml	1 x 10µl	1 x 20µl
Signal Indicator, 1000X	1 x 5µl	1 x 10µl

Images



The results are closely correlated with those obtained by MS-LC.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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