

Product datasheet

Urine 5-methylcytosine Quantification Kit (Fluorometric) ab156904

2 Images

Overview

Product name	Urine 5-methylcytosine Quantification Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Urine
Assay type	Competitive
Sensitivity	>= 0.3 nM
Range	0.05 ng/well - 1 ng/well
Assay time	4h 0m
Species reactivity	Reacts with: Human, a wide range of other species
Product overview	Abcam's Urine 5-methylcytosine Quantification Kit (Fluorometric) is a complete set of optimized buffers and reagents to fluorometrically quantify 5-mC in urine using an inhibitory competitive immunoassay method. It is suitable for detecting total urinary 5-methylcytosine levels, resulting from whole body turnover or degradation of methylated DNA/RNA in urine from humans and animals. The urine samples can be in fresh or frozen form.
Notes	<p>Nucleobase 5-methylcytosine (5-mC), a modified form of cytosine converted by cytosine methyltransferases, is widespread both in DNA and different cellular RNAs. The biological importance of DNA 5-mC methylation as a major epigenetic modification in phenotype and gene expression has been widely recognized. Recent data strongly suggests that RNA 5-mC methylation is also involved in the regulation of various biological processes including tRNA stability/recognition and mRNA translation.</p> <p>Urinary excretion of 5-mC including both 5-methyl-2-deoxycytidine and 5-methylcytidine is an indication of a whole body turnover or degradation of methylated DNA and RNA. The urinary 5-mC level can be altered by a change of the bodies' turnover of methylated DNA/RNA or alteration of cellular DNA/RNA methylation status. A number of studies have indicated that 5-mC excreted in urine has the potential to act as a cancer biomarker, with an increased level arising from disease onset and progression. For example, an elevated level of urinary 5-mC was observed in lung cancer, breast cancer, and leukemia patients with active disease states. It was also shown that urinary 5-mC excretion is effected by Alzheimer's disease or by radiation treatment. It is suggested that urinary 5-mC might be applicable as a biological marker for detecting some types of cancer and monitoring cancer progression after treatment with radiation or demethylation reagents.</p>
Platform	Microplate reader

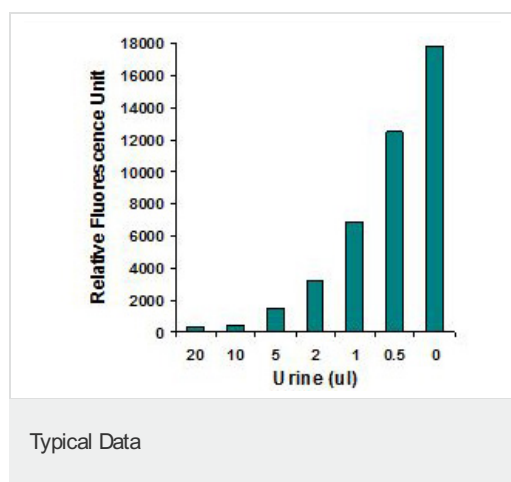
Properties

Storage instructions

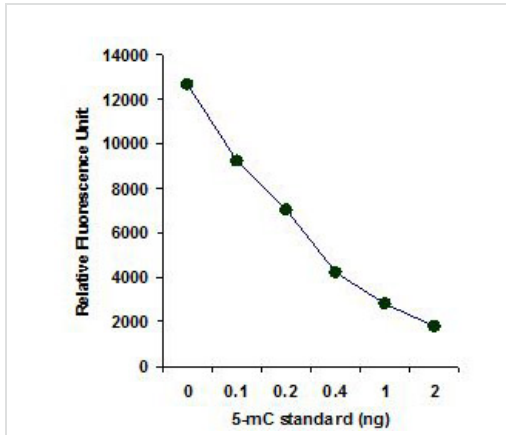
Please refer to protocols.

Components	48 tests	96 tests
1000X Capture Antibody	1 x 4 μ l	1 x 8 μ l
10X Wash Buffer	1 x 14ml	1 x 28ml
2000X Detection Antibody	1 x 4 μ l	1 x 8 μ l
320X 5-mC DNA Solution	1 x 15 μ l	1 x 30 μ l
5-mC Standard, 4 μ g/mL	1 x 10 μ l	1 x 20 μ l
Assay Plate	1 x 6 units	1 x 12 units
Binding Solution	1 x 5ml	1 x 10ml
Dilution Buffer	1 x 4ml	1 x 8ml
Enhancer Solution	1 x 4 μ l	1 x 8 μ l
Fluoro Developer	1 x 10 μ l	1 x 20 μ l
Fluoro Enhancer	1 x 10 μ l	1 x 20 μ l
Negative Control, 50 μ g/mL	1 x 10 μ l	1 x 20 μ l
Sample Preparation Plate	1 x 6 units	1 x 12 units

Images



5-mC level is quantified from different volumes of Human urine using ab156904.



5-mC standard was added into the assay wells at different concentrations and then measured with ab156904.

Typical Standard Curve

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