

Product datasheet

Hydroxymethylated DNA Quantification Kit (Fluorometric) ab117131

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Overview

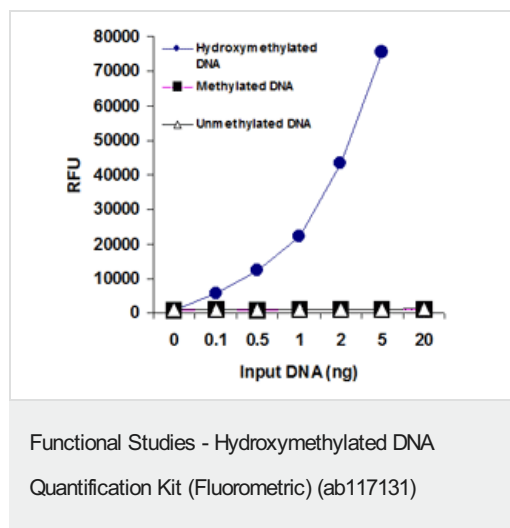
Product name	Hydroxymethylated DNA Quantification Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Saliva, Urine, Plasma, Tissue, Adherent cells, Suspension cells
Assay type	Quantitative
Sensitivity	>= 10 pg/well
Assay time	3h 20m
Species reactivity	Reacts with: Mammals, Other species
Product overview	<p>DNA methylation is a covalent modification of the cytosine ring at the 5' position, resulting in <i>5-methylcytosine (5-mC)</i>. In somatic cells, 5-mC is found almost exclusively in the context of paired symmetrical methylation of the dinucleotide CpG. The biological important of 5-mC as a major epigenetic modification in phenotype and gene expression has been recognized widely. Quite recently, a novel modified nucleotide, <i>5-hydroxymethylcytosine (5-hmC)</i>, has been detected to be abundant in mouse brain and embryonic stem cells. It is a hydroxylated and methylated form of cytosine. Although it is still uncertain its specific role in epigenetics, it is believed it plays a role in DNA demethylation, chromatin remodeling and gene expression regulation.</p> <p>Hydroxymethylated DNA Quantification Kit (Fluorometric) (ab117131) is a complete set of optimized buffers and reagents to quantify global DNA hydroxymethylation by specifically measuring levels of 5-hydroxymethylcytosine (5-hmC) without cross-reactivity to methylcytosine and unmethylated cytosine.</p> <p>It can be paired to use with <u>EpiSeeker methylated DNA Quantification Kit (Fluorometric) (ab117129)</u>, which specifically quantifies <i>5-mC</i>, for simultaneously quantification of both methylated and hydroxymethylated DNA.</p>
Platform	Microplate reader

Properties

Storage instructions	Please refer to protocols.
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Components	48 tests	96 tests
10X Wash Buffer	1 x 14ml	1 x 28ml
8-Well Assay Strips (with Frame)	6 units	12 units
Binding Solution	1 x 5ml	1 x 10ml
Capture Antibody, 1000 µg/mL	1 x 4µl	1 x 8µl
Detection Antibody, 400 µg/mL	1 x 8µl	1 x 16µl
Enhancer Solution	1 x 8µl	1 x 16µl
Fluoro Developer	1 x 8µl	1 x 16µl
Fluoro Dilutor	1 x 4ml	1 x 8ml
Fluoro Enhancer	1 x 8µl	1 x 16µl
Negative Control I, 20 µg/mL	1 x 10µl	1 x 20µl
Negative Control II, 20 µg/mL	1 x 10µl	1 x 20µl
Positive Control, 20 µg/mL	1 x 10µl	1 x 20µl

Images



Demonstration of high sensitivity and specificity of 5-hydroxymethylcytosine detection achieved using ab117131. Synthetic unmethylated DNA (contains only cytosine), methylated DNA (contains only 5-methylcytosine), and hydroxymethylated DNA standard (contains only 5-hydroxymethylcytosine) were added into the assay wells at different concentrations and then measured with ab117131.

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