

Mouse 5-hmC & 5-mC DNA Set

Organ-specific mouse genomic DNA standards for detection and quantification of 5-mC and 5-hmC

Highlights

- Set of four organ-specific purified mouse genomic DNA standards from brain, kidney, liver, and thymus.
- Precisely quantified levels of 5-methylcytosine (5-mC) and 5-hydroxymethylcytosine (5-hmC) via mass spectrometry (LC/MS).
- Useful controls for detection method of 5-mC or 5-hmC.

Catalog Numbers:

D5019, D5019-1, D5019-2, D5019-3, D5019-4



Scan with your smart-phone camera to view the online protocol/video.



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Product Contents

Mouse 5-hmC & 5-mC DNA Set	D5019	D5019-1	D5019-2	D5019-3	D5019-4	Storage Temp.
Mouse Brain DNA	5 µg/20 µl	5 µg/20 µl	-	-	-	-20°C
Mouse Kidney DNA	5 µg/20 µl	-	5 µg/20 µl	-	-	-20°C
Mouse Liver DNA	5 µg/20 µl	-	-	5 µg/20 µl	-	-20°C
Mouse Thymus DNA	5 µg/20 µl	-	-	-	5 µg/20 µl	-20°C

Specifications

- **Source** – Swiss Webster mice, 8-10 weeks old.
- **Concentration** – 250 ng/µl in modified TE buffer (10mM Tris-HCl; 0.1mM EDTA; pH 8.0).

Product Description

The **Mouse 5-hmC & 5-mC DNA Set** is a set of organ specific mouse genomic DNAs isolated from a pool of 8–10-week-old Swiss Webster mice. This genomic DNA set is an ideal control for detection and/or quantification methods against 5-methylcytosine (5-mC) and 5-hydroxymethylcytosine (5-hmC) as both modified cytosines are present at physiologically relevant levels and loci. The levels of 5-methylcytosine and 5-hydroxymethylcytosine within the **Mouse 5-hmC & 5-mC DNA Set** have been precisely quantified by mass spectrometry (LC/MS) and been validated to be consistent by ELISA. Percentages of each modified cytosine are listed below.

	Brain	Kidney	Liver	Thymus
5-hmC %	0.548	0.225	0.107	0.030
5-mC %	8.06	6.62	7.13	7.54

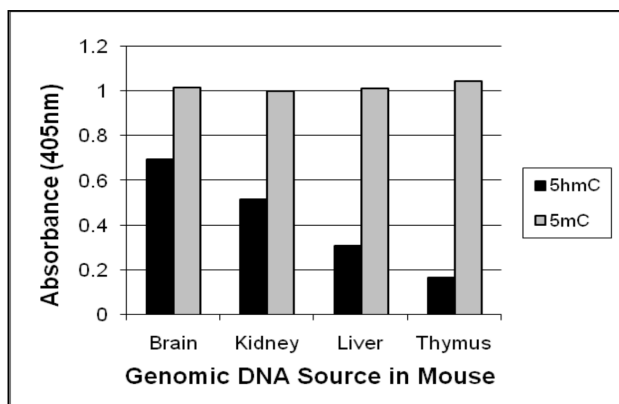


Figure 1. ELISA assays of Mouse 5-hmC & 5-mC DNA Set. Anti-5-methylcytosine or anti-5-hydroxymethylcytosine antibodies were confidently able to reproduce trends in levels of 5-methylcytosine and 5-hydroxymethylcytosines quantified by mass spectrometry.

Recommended Usage

The **Mouse 5-hmC & 5-mC DNA Set** can be used as controls for bisulfite conversion and downstream analyses such as bisulfite PCR, methylation sequencing applications, methylation assay calibration, and more.

Protocol

For best results, it's important to ensure the DNA is completely homogenous and fully in solution before quantification and usage. The following steps are recommended before quantification and usage¹:

1. Bring the standards to room temperature.
2. Vortex the standards for 10-15 seconds, briefly spin down for 5-10 seconds.
3. Repeat Step 2 twice, for three times total.
4. Proceed with quantification or usage.

¹Standards are quantified using NanoDrop® measurements. If using other methods, variation may be observed.

Ordering Information

Product Description	Catalog No.	Size
Human Methylated & Non-methylated DNA Set	D5014	5 µg/20 µl
Human HCT116 DKO Non-Methylated DNA	D5014-1	5 µg/20 µl
Human HCT116 DKO Methylated DNA	D5014-2	5 µg/20 µl
Bisulfite-Converted Universal Methylated Human DNA Standard	D5015	1 µg/50 µl
ZymoTaq™ qPCR Premix	E2054 E2055	50 Rxns. 200 Rxns.
ZymoTaq™ Premix	E2003 E2004	50 Rxns 200 Rxns.
EZ DNA Methylation-Lightning™ Kit	D5030 D5031	50 Rxns 200 Rxns.
EZ DNA Methylation-Direct™ Kit	D5020 D5021	50 Rxns 200 Rxns.
EZ DNA Methylation™ Kit	D5001 D5002	50 Rxns 200 Rxns.
EZ DNA Methylation-Gold™ Kit	D5005 D5006	50 Rxns 200 Rxns.



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