BioChain®

Sample Preparation for Diagnostics and Life Science Research

gDNA Set for Methylation Studies

Natural, Non-recombinant Human Genomic DNA and Human Cell Line DNA

Natural Low Level Methylated DNA Isolated From Human Blood and Cell Line

Epigenetic changes in DNA have been implicated in playing a central role in diseases such as cancer. These changes are more difficult to detect because they are not caused by changes to the DNA sequence. One such mechanism is an altered DNA methylation state. Besides being implicated in tumorigenesis, changes in DNA methylation have also been linked to development and imprinting. Thus, detecting altered methylation patterns have been widely used for early cancer screening, X chromosome profiling, genomic imprinting, and aging.

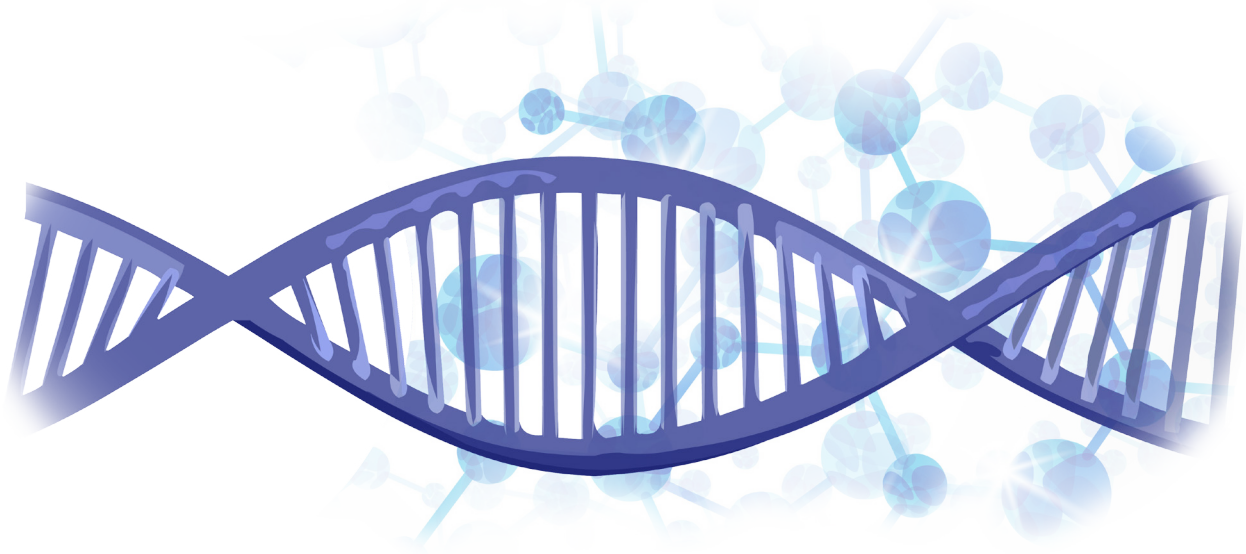
BioChain provides human genomic DNA from peripheral blood leukocytes and a human lymphocyte cell line. The DNA derived from these sources have a low endogenous level of methylation and display batch-to-batch consistency. These sources provide DNA that can be used as a naturally occurring baseline control. This is unlike DNA obtained from DNA methyltransferase knockout cell lines which has been manipulated synthetically. The isolated genomic DNA is then enzymatically methylated to be used as a methylation-positive control.

Key Features

- DNA Pairs containing one vial of each:
  - gDNA with low endogenous level of methylation
  - gDNA that has been enzymatically methylated
- Isolated from human blood and cell line
- Contain specific control primers

Applications:

- Bisulfite sequencing
- Methylation specific PCR
- Combined bisulfite restriction analysis
- Methylated CpG island recovery assay



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Validated natural methylation control pairs from human cell lines

Expected human vimentin sequence:

CGCCGCCGCCCAGGCCATCGCCACCCTCCGCAGCCATGTCCACCAGGTCCGTGTCCTCG

Normal vimentin DNA sequence from human tissue---after bisulfite conversion:

CGTCGTCGTTTAGGTTATCGTTATTTTTCGTAGTTATGTTTATTAGGTTCGTGTTTTCT

Enzymatically methylated vimentin DNA sequence--after bisulfite conversion:

CGTCGTCGTTTAGGTTATCGTTATTTTTCGTAGTTATGTTTATTAGGTTCGTGTTTTCG

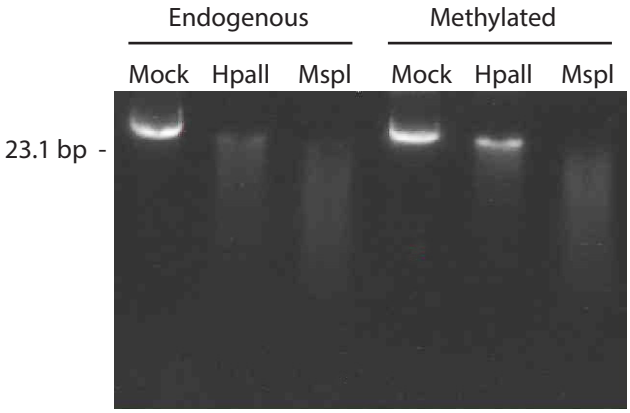

Figure 1. Digestion of endogenous low methylated and methylated cell line with restriction enzymes HpaII and MspI. HpaII digests methylated DNA. MspI digests both non-methylated and methylated DNA.

Catalog No.	Product	Unit
D6234148-PP	Methylated & Low-Methylated DNA Matched Pair - Human Peripheral Blood Leukocyte	2 x 5 µg
D6254874-PP	Methylated &Low-Methylated DNA Matched Pair - Human Lymphocyte Cell Line	2 x 5 µg
	Related Products	
K5082100	DNA Methylation Detection Kit	1 Kit
D6255815	Human Methylated DNA Control	5 µg

Please inquire about our other kits and applications.

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