

EpiTect[®] Methyl II PCR Array System

For pathway- or disease-focused profiling of regional DNA methylation, without bisulfite conversion, using MethylScreen[™] Technology

The EpiTect Methyl II PCR Array System is an innovative technology enabling fast and accurate detection of CpG island DNA methylation of individual genes, as well as disease- and pathway-focused gene panels. This technology does not require bisulfite conversion. With a simple restriction enzyme digestion followed by real-time PCR, the DNA methylation levels of 22 or 94 different genes can be analyzed simultaneously using DNA Methylation PCR Arrays. The simplicity of the procedure makes this technology highly suited for profiling DNA methylation and biomarker characterization. The EpiTect Methyl II PCR Array System uses the MethylScreen Technology provided under license from Orion Genomics, LLC.

EpiTect Methyl II PCR System provides:

- Combined reliability of controlled restriction digestion with qPCR detection
- Genomewide, ready-to-use, predesigned primer assays
- Profiling of multiple targets simultaneously in a single qPCR run
- Free Web-based and automated data analysis tools
- Controls to monitor enzymatic activities of restriction digestion enzymes

Sensitivity of EpiTect Methyl II Assays

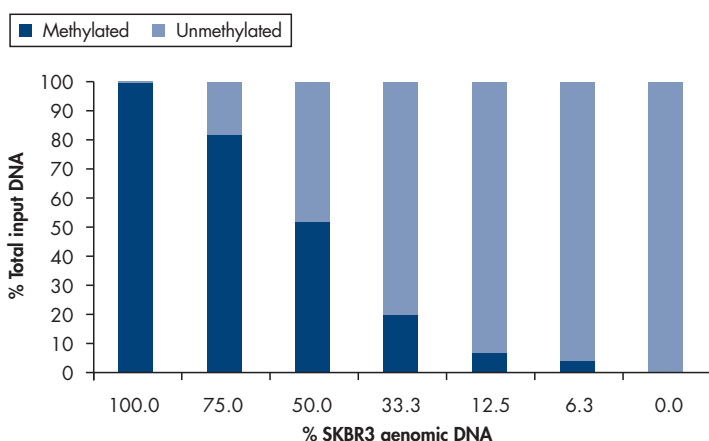


Figure 1. EpiTect Methyl II PCR assay detects methylation in heterogeneous samples. The analytical sensitivity of the EpiTect Methyl II PCR Assay was tested using a serial dilution of SKBR3 cell line genomic DNA and peripheral blood leukocyte genomic DNA. Using Human HIC1 DNA EpiTect Methyl II PCR Primers, the percentage of methylated HIC1 relative to the total amount of input DNA was detectable in each mixture even down to only 6% of the total DNA sample. The HIC1 gene promoter is methylated in cancer cells and unmethylated in normal cells.

Workflow of EpiTect Methyl II PCR Array System

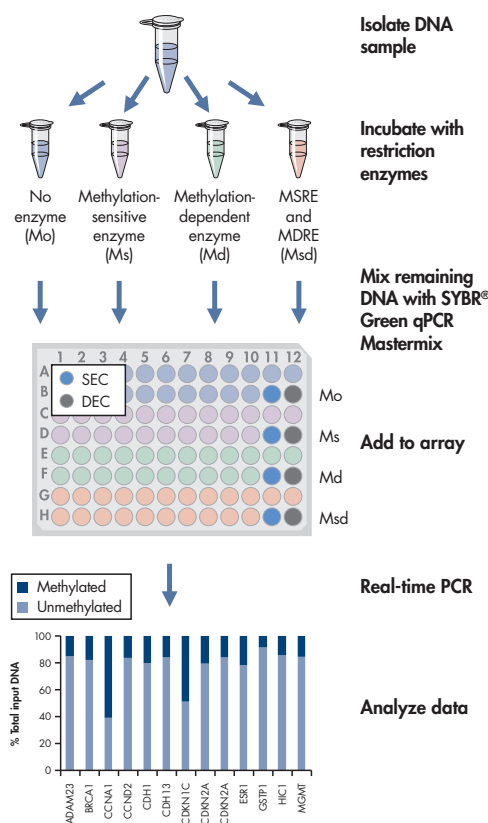
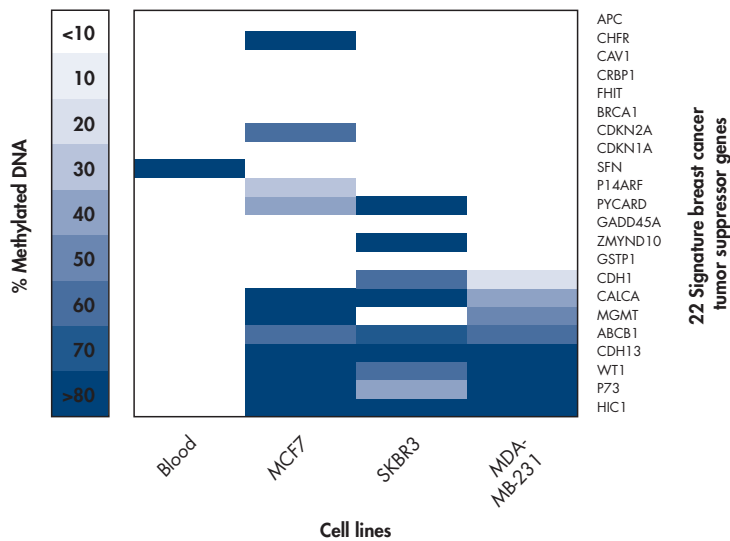


Figure 2. Schematic view of the EpiTect Methyl II PCR Array System procedure. The system relies on the differential cleavage of target sequences by two different restriction endonucleases. qPCR allows the analysis of the methylation status of up to 94 targets simultaneously. SEC and DEC are control assays for monitoring enzymatic activities of restriction digestion enzymes.



Breast cancer biomarker screening



Focus on biology:

- Tumor Suppressor Genes
- Inflammatory Response & Autoimmunity
- Colon Cancer
- Breast Cancer
- Prostate Cancer
- Melanoma
- Liver Cancer
- Epithelial-to-Mesenchymal Transition (EMT)
- Homeobox (HOX) Genes
- Polycomb & Trithorax Complexes
- Cancer miRNA
- WNT Signaling
- Many others

Figure 3. EpiTect Methyl II PCR Arrays validate breast cancer gene methylation status in breast cancer cell lines. The heat map compares the methylation status of genes in the genomic DNA of three breast cancer cell lines and blood genomic DNA (control) as determined by the Human Breast Cancer Signature Panel EpiTect Methyl II PCR Arrays.

Ordering Information

Product	Contents	Cat. no.
EpiTect Methyl II DNA Restriction Kit (12)	Reagents for the cleavage of methylated and unmethylated DNA for processing up to 12 DNA samples	335452
EpiTect Methyl II Signature PCR Array (22)	For methylation analysis of 22 genes in a 96-well or 384-well plate format, custom panels available	335212
EpiTect Methyl II Complete PCR Array (94)	For methylation analysis of 94 genes in a 96-well or 384-well plate format, custom panels available	335222
EpiTect Methyl II PCR Assay (200)	Laboratory-verified forward and reverse primers for 200 25 µl reactions reactions	335002
Related Products		
RT ² SYBR Green qPCR Mastermixes	Reagents for real-time PCR reactions (available with ROX, fluorescein, or no internal reference dye)	Varies

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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