

qBiomarker Somatic Mutation PCR Arrays

For screening disease-focused mutation panels by PCR

Accurate detection of mutations in research samples or cell lines is critical for toxicological, drug development, and cancer studies. qBiomarker Somatic Mutation PCR Arrays are panels of real-time PCR assays for assessing the status of 85 to 370 mutations within a pathway-focused set of genes from fresh frozen or FFPE samples.

qBiomarker Somatic Mutation PCR Arrays provide:

- Detection of mutations in genes associated with oncogenesis
- Superior sensitivity compared to other mutation detection methods
- A fast, simple real-time PCR protocol compatible with most instruments

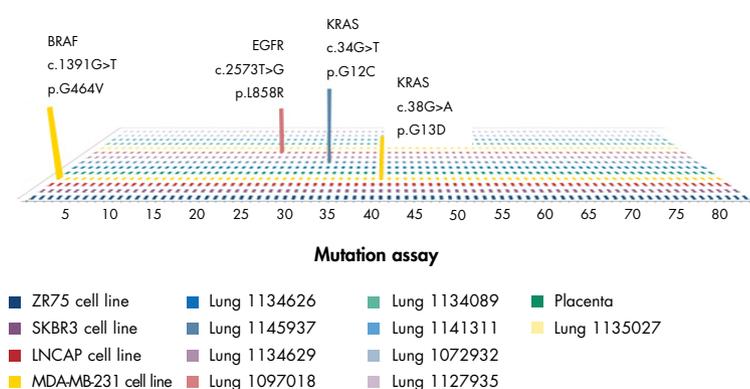


Figure 1. qBiomarker Somatic Mutation PCR Arrays profile somatic mutations in FFPE samples. The Human EGFR Pathway qBiomarker Somatic Mutation PCR Array was used to assess the status of 85 mutations (x-axis) in 14 FFPE samples (y-axis), consisting of 4 cell lines, a wildtype placenta sample (control), and 9 lung adenocarcinoma samples. BRAF and KRAS mutations were detected in MDA-MB-231 cells, and a KRAS mutation and an EGFR mutation were detected in 2 adenocarcinoma samples.

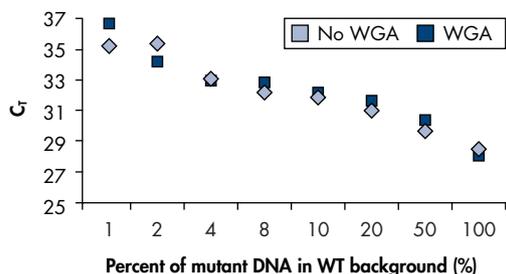


Figure 2. qBiomarker Somatic Mutation PCR Arrays show high sensitivity in both standard and whole-genome-amplified (WGA) samples. qBiomarker Somatic Mutation PCR Arrays are performance-verified to detect mutations with as little as 1% mutant DNA. Here, a dilution series of mixed genomic DNA samples from A375 cells (BRAF V600E-positive) and wildtype DNA were tested for BRAFV600E. Standard samples showed similar C_t values compared to WGA samples.

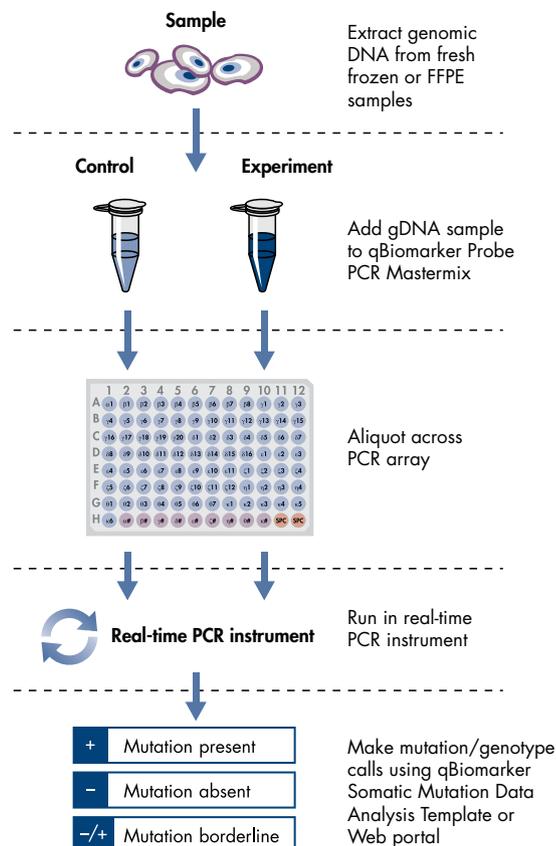
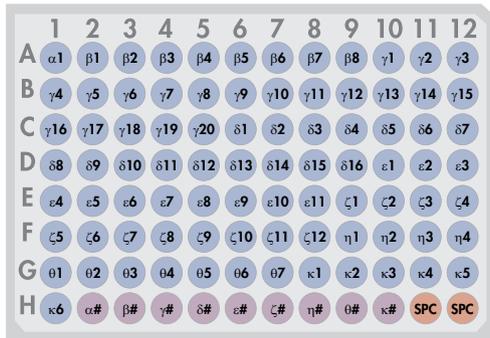


Figure 3. qBiomarker Somatic Mutation PCR Array workflow.

The simplicity of the qBiomarker Somatic Mutation PCR Array procedure achieves mutation profiling in less than 3 hours. Genomic DNA is purified from fresh frozen or formalin-fixed, paraffin-embedded samples. The gDNA sample is mixed with qBiomarker Probe PCR Mastermix, and the mixture is aliquotted across the array plate. The array includes copy number and positive PCR controls, and Web-based data analysis software is provided for making mutation/genotype calls.





□ Somatic mutations □ Copy number □ Positive PCR controls

Figure 4. Layout of qBiomarker Somatic Mutation PCR Arrays. Each plate well contains a qBiomarker Somatic Mutation PCR Assay (light blue). qBiomarker Probe PCR Mastermix is provided with each qBiomarker Somatic Mutation PCR Array. Each Greek letter on the schematic represents a different gene, while each number represents a unique mutation in each gene. The status of up to 85 mutations can be screened with one array. Copy number controls (purple) and positive PCR controls (SPC) are also included.

Examples of available qBiomarker Somatic Mutation PCR Arrays

Pathways	Cancers	High-content arrays (384-well only)
EGFR	Breast Cancer	Cancer Comprehensive Panel
FGFR	Colon Cancer	Human Oncogene Panel
RTK - Panel I	Hematopoietic Neoplasms	Oncogene and Tumor Suppressor Panel
RTK - Panel II	Lung Cancer	Tumor Suppressor Panel
Ras-Raf	Skin Cancers	Tyrosine Kinases & Cell Signaling Pathways Panel
ErbB2	Brain Cancers	Lung and Colon Cancers (Expanded Panel)
KIT	Melanoma	
p53/Rb	Bladder Cancer	
PDGFR	Endometrial Cancer	
PI3K-PTEN	Pancreatic Cancer	
c-MET	Ovarian Cancer	
FLT3	Thyroid Cancer	
APC/ CTNNB1	Soft Tissue Tumors	
	Lymphoid Neoplasms	
Custom arrays		

Ordering Information

Product	Contents	Cat. no.
qBiomarker Somatic Mutation PCR Arrays	PCR plate and mastermix; see website for complete list of pathways	337021
qBiomarker Somatic Mutation PCR Assays	PCR assay and mastermix for 100 assays	337011
Related products		
QIAamp® DNA Mini Kit (50)	For 50 DNA preps: 50 QIAamp Mini Spin Columns, QIAGEN Proteinase K, Reagents, Buffers, Collection Tubes (2 ml)	51304
QIAamp DNA FFPE Tissue Kit (50)	For 50 DNA preps: 50 QIAamp MinElute Columns, Proteinase K, Buffers, Collection Tubes (2 ml)	56404
REPLI-g® UltraFast Mini Kit (25)	DNA Polymerase, Buffers, and Reagents for 25 x 20 µl ultrafast whole genome amplification reactions	150033

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Discover more, visit www.sabiosciences.com/somaticmutation.php!

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