

# qBiomarker Somatic Mutation PCR Array

## Human DNA QC Plate

Cat. no. 337021 SMH-999A

**For real-time PCR-based, pathway-focused, somatic mutation profiling**

| Format                     | For use with the following real-time cyclers                                                                                                                                                                             |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Format A, with fluorescein | Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2                                                                                                                                                                            |
| Format A, with ROX™        | Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well blocks); Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P® |
| Format C, with ROX         | Applied Biosystems models 7500 (Fast, 96-well block), 7900HT (Fast, 96-well block), StepOnePlus™, ViiA 7 (Fast, 96-well block)                                                                                           |
| Format D, with ROX         | Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®                                                                                                                 |
| Format E, with ROX         | Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™                                                                                                                              |
| Format F, with ROX         | Roche® LightCycler® 480 (96-well block)                                                                                                                                                                                  |
| Format G, with ROX         | Roche LightCycler 480 (384-well block)                                                                                                                                                                                   |



Sample & Assay Technologies

## Description

The Human DNA QC Plate qBiomarker Somatic Mutation PCR Array is designed to assess the quality of any DNA sample by measuring the CT values of the following 7 reference genes: BRAF, KRAS, HRAS, NRAS, MEK1, PIK3CA, and PTEN. When DNA quality is low (e.g., due to cross-linking or fragmentation), the CT values from these 7 genes will be much higher than those from the same amount of high-quality DNA. Each QC plate can analyze 12 DNA samples in the 96-well plate format (each column is for one sample) or 48 samples in the 384-well plate format. A PCR positive control assay (SMPC) is also included for each sample.

For further details, consult the *qBiomarker Somatic Mutation PCR Handbook*.

## Shipping and storage

qBiomarker Somatic Mutation PCR Arrays are shipped at ambient temperature or on blue ice packs. For long term storage, keep plates at  $-20^{\circ}\text{C}$ . Ensure that you have the correct qBiomarker Somatic Mutation PCR Array format for your real-time cycler (see table above). qBiomarker Probe Mastermixes are shipped on blue ice packs. For long term storage, keep qBiomarker Probe Mastermixes at  $4^{\circ}\text{C}$ .

**Note:** Ensure that you have the correct qBiomarker Probe Mastermix, with the correct reference dye if required, for your instrument.

**Note:** Open the package and store the products appropriately immediately on receipt.

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## Assay table

[illegible]

| Position | Gene | COSMIC ID | Nucleotide Change    | Amino Acid Change    | Assay Catalog # |
|----------|------|-----------|----------------------|----------------------|-----------------|
| G01      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G02      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G03      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G04      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G05      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G06      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G07      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G08      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G09      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G10      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G11      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| G12      | PTEN | 99000013  | copy number          | copy number          | SMPH017175A     |
| H01      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H02      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H03      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H04      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H05      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H06      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H07      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H08      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H09      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H10      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H11      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |
| H12      | SMPC | 99000017  | positive PCR control | positive PCR control | SMPH017179A     |

# Array layout

|   | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| A | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   | BRAF   |
| B | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   | KRAS   |
| C | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   | HRAS   |
| D | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   | NRAS   |
| E | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   | MEK1   |
| F | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA | PIK3CA |
| G | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   | PTEN   |
| H | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   | SMPC   |

qBiomarker Somatic Mutation PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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