# miProfile™ Human Single-Nucleotide Mismatched miRNA qPCR Array

**For focused group profiling of human single-nucleotide mismatched miRNA expression**
Cat. No. QM003-A (1 x 96-well plate, Format A)
Cat. No. QM003-B (1 x 96-well plate, Format B)
Cat. No. QM003-C (1 x 96-well plate, Format C)
Cat. No. QM003-D (1 x 96-well plate, Format D)
Cat. No. QM003-E (1 x 96-well plate, Format E)

Available as 1 set or 6 sets. Each set contains 61 unique miRNA primers deposited in one 96-well plate.

## Introduction

To help best distinguish single-nucleotide mismatched miRNAs, 61 single-nucleotide mismatched miRNAs from the human miRNome are grouped together on one 96-well plate. The miProfile human single-nucleotide mismatch miRNA qPCR arrays are available as stand-alone products for users who want to study these miRNAs using specific PCR conditions.

- QM003 plate 01: 61 unique miRNA PCR primer pairs

## Shipping and storage condition

Shipped at room temperate
Stable for at least 6 months when stored at -20℃

## Array format

GeneCopoeia provides five qPCR array formats (A, B, C, D, and E) suitable for use with the following real-time cyclers.

**Important note:** Upon receiving, please check to make sure that the correct array format was ordered to ensure the compatibility with your qPCR instrument.

| Plate format | Instrument provider | qPCR instrument model |
|---|---|---|
| **A** (96-well) | Applied Biosystems | 5700, 7000, 7300, 7500, 7700, 7900HT (Standard 96-well block), ViiA™7 (Standard 96-well block) |
| **B** (96-well) | Applied Biosystems | 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA™7 (Fast block) |
| **C** (96-well) | Bio-Rad Laboratories | iCycler iQ®, MyiQ™, iQ™5 |
| **D** (96-well) | Bio-Rad Laboratories | CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™ |
| **E** (96-well) | Roche Applied Science | LightCycler® 480 (96-well block) |

## Quality control

1. Each miRNA-specific primer in the miProfile miRNA qPCR array has been experimentally validated to yield a single dissociation curve peak and to generate a single amplicon of the correct size for the targeted miRNA.
2. The positive PCR controls (PCR) have been verified to amplify a single amplicon of the correct size with Ct values around **20±2**.

3. The Spike-in reverse transcription controls (RT) have been verified to amplify a single amplicon of the correct size with Ct values around **20±3**.

4. $R_2$ > 0.99 was observed for high inter/ intra-array reproducibility.

**Materials required but not provided**

All-in-OneTM miRNA First-Strand cDNA Synthesis Kit
All-in-OneTM qPCR Mix
Total RNA extraction kit (RNAzol® RT RNA extraction reagent is recommended)
DNase/RNase free tips, PCR reaction tubes, 1.5 ml microcentrifuge tubes
5 ml and 10 ml graduated pipettes, beakers, flasks, and cylinders
10 µl to 1,000 µl adjustable single channel micropipettes with disposable tips
5 µl to 20 µl adjustable multichannel micropipette, disposable tips, and reservoir
qPCR instrument, compatible with gene qPCR arrays ordered

**Array layout**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| B | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| C | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| D | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| E | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| F | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| G | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| H | **NC** | **NC** | **HK1** | **HK2** | **HK3** | **HK4** | **HK5** | **HK6** | **RT** | **RT** | **PCR** | **PCR** |

**Figure1. Illustration of miProfile miRNA qPCR array (96-well plate)**

- **miRNA primer pairs:** Wells 1-84 are designated wells for pre-deposited miRNA primer pairs.
- **NC:** Negative controls, which only have the pre-deposited reverse universal primers.
- **HK1-6:** Six pre-deposited housekeeping snRNAs primer pairs, which can be used as endogenous positive controls as well as for array normalization.
- **RT:** Three replicates of spike-in reverse transcription controls, which can be used to monitor the efficiency of the RT reaction. These pre-deposited primer pairs specifically amplify the cDNA template reversed transcribed from the spike-in exogenous RNA in the sample.
- **PCR:** Three replicates of positive PCR controls, which are used to verify the PCR efficiency by amplifying the pre-deposited DNA template with its specific pre-deposited primer pairs.

**miRNA primer list**

The primer list can be downloaded from http://www.genecopoeia.com/product/qpcr-arrays/mirna/mirnome.php.

## Limited Use License

Following terms and conditions apply to use of miProfile™ Human Single-Nucleotide Mismatched miRNA qPCR Array (the Product). If the terms and conditions are not acceptable, the Product in its entirety must be returned to GeneCopoeia within 5 calendar days. A limited End-User license is granted to the purchaser of the Product. The Product shall be used by the purchaser for internal research purposes only. The Product is expressly not designed, intended, or warranted for use in humans or for therapeutic or diagnostic use. The Product must not be resold, repackaged or modified for resale, or used to manufacture commercial products or deliver information obtained in service without prior written consent from GeneCopoeia. This Product should be used in accordance with the NIH guidelines developed for recombinant DNA and genetic research. Use of any part of the Product constitutes acceptance of the above terms.

## Limited Warranty

GeneCopoeia warrants that the Product meets the specifications described in the accompanying Product Datasheet. If it is proven to the satisfaction of GeneCopoeia that the Product fails to meet these specifications, GeneCopoeia will replace the Product. In the event a replacement cannot be provided, GeneCopoeia will provide the purchaser with a refund. This limited warranty shall not extend to anyone other than the original purchaser of the Product. Notice of nonconforming products must be made to GeneCopoeia within 30 days of receipt of the Product. GeneCopoeia's liability is expressly limited to replacement of Product or a refund limited to the actual purchase price.
GeneCopoeia's liability does not extend to any damages arising from use or improper use of the Product, or losses associated with the use of additional materials or reagents. This limited warranty is the sole and exclusive warranty. GeneCopoeia does not provide any other warranties of any kind, expressed or implied, including the merchantability or fitness of the Product for a particular purpose.

GeneCopoeia is committed to providing our customers with high-quality products. If you should have any questions or concerns about any GeneCopoeia products, please contact us at 301-762-0888.



GeneCopoeia, Inc.
9620 Medical Center Drive, Suite 101
Rockville, MD 20850
+1 (301) 762-0888
+1 (866) 360-9531
inquiry@genecopoeia.com

 QM003160203