

miProfile™ Human Breast Cancer miRNA qPCR Array

For focused group profiling of human breast cancer related miRNA expression

Cat. No. QM005-A (2 x 96-well plate, Format A)

Cat. No. QM005-B (2 x 96-well plate, Format B)

Cat. No. QM005-C (2 x 96-well plate, Format C)

Cat. No. QM005-D (2 x 96-well plate, Format D)

Cat. No. QM005-E (2 x 96-well plate, Format E)

Available as 1 set or 6 sets. Each set contains 168 unique miRNA primers deposited in two 96-well plates.

Introduction

The miProfile human breast cancer miRNA qPCR array profiles the expression of 168 miRNAs, which have been identified for their associations with breast tumorigenesis either as oncogenes or as tumor suppressors. For example, the expression of miR-126 and miR-335 is lost in the majority of primary breast tumors from patients who relapse. Most significantly, early manifestation of altered miRNA expression in breast cancer suggests that these miRNAs may have a potential clinical application as a novel biomarker for early detection. Through investigating the miRNA expression profile in breast cancers, one can evaluate the molecular mechanisms involved in malignant progression of breast tumors, and discover a potential approach for diagnosis, prognosis, and therapy response in human breast cancers.

- QM005 plate 01: 84 unique miRNA PCR primer pairs
- QM005 plate 02: 84 unique miRNA PCR primer pairs

Shipping and storage condition

Shipped at room temperature

Stable for at least 6 months when stored at -20 °C

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-One™ miRNA First-Strand cDNA Synthesis Kit
 All-in-One™ 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 reverse 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/cancer.php>.

Limited Use License

Following terms and conditions apply to use of miProfile™ Human Breast Cancer 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.

© 2016 GeneCopoeia, Inc.

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

GeneCopoeia Products are for Research Use Only

Trademarks: GeneCopoeia™, miProfile™, All-in-One™, miProfile™ (GeneCopoeia Inc.); SYBR® (Molecular Probes); iCycler iQ®, MyiQ™, iQ™5, CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™ (Bio-Rad); LightCycler® (Roche); Trizol™, ABI®, ROX®, ViiA™, StepOnePlus™ (Life Technologies); NanoDrop™ (Thermo Scientific).

Copyright © 2016 GeneCopoeia, Inc.

QM005160203