

# miRCURY LNA™ miRNA Focus PCR Panels

## Human Immunopathology V2 Product Data Sheet

Cat. no. 339325 YAHS-204Y

For mature miRNA expression profiling using real-time PCR

Format	Suitable real-time cyclers	Plate	Cat. no.
A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® MasterCycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara: TP-800	96-well	YAHS-204YA
C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)	96-well	YAHS-204YC
D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®	96-well	YAHS-204YD
E	Applied Biosystems® models 7900HT (384-well block), ViiA™ 7 (384-well block); Bio-Rad CFX384™	384-well	YAHS-204YE
F	Roche® LightCycler® 480 (96-well block)	96-well	YAHS-204YF
G	Roche® LightCycler® 480 (384-well block)	384-well	YAHS-204YG

### Description

The Human Immunopathology V2 miRCURY LNA™ miRNA Focus PCR Panel profiles the expression of 84 miRNAs differentially expressed during normal and pathological responses by the immune system. This array provides immunology researchers with a convenient way to quickly analyze the miRNAs most relevant to the function of lymphocytes and other immune cells. The miRNAs have been carefully selected based on results published in peer-reviewed journals that suggest a correlation with inflammation, leukemia, lymphoma, autoimmune disorders, or other immune responses. Other miRNAs included on the array have been shown to functionally target specific transcripts encoding cytokines, other immunological regulatory proteins, and immune response signaling pathway components. The profiling results from this array can serve as a useful molecular marker for the study of normal and disease-associated immune responses. The results may also provide a deeper understanding of the molecular mechanisms regulating immunological gene expression by miRNA. A set of controls present on this array enables data analysis using the  $\Delta\Delta CT$  method of relative quantification, assessment of reverse transcription performance, and assessment of PCR performance. Using SYBR Green-based real-time PCR, the expression of a focused panel of miRNAs related to immunopathology can be easily and reliably analyzed with this miRCURY LNA™ miRNA Focus PCR Panel.

For further details, consult the *miRCURY LNA™ miRNA Focus PCR Panels Handbook*.

Array Layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	hsa-let-7a-5p	hsa-let-7c-5p	hsa-let-7d-5p	hsa-let-7e-5p	hsa-let-7g-5p	hsa-miR-103a-3p	hsa-miR-105-5p	hsa-miR-125a-5p	hsa-miR-125b-5p	hsa-miR-126-3p	hsa-miR-128-3p	hsa-miR-130a-3p
B	hsa-miR-132-3p	hsa-miR-134-5p	hsa-miR-135a-5p	hsa-miR-135b-5p	hsa-miR-138-5p	hsa-miR-142-3p	hsa-miR-142-5p	hsa-miR-143-3p	hsa-miR-145-5p	hsa-miR-146a-5p	hsa-miR-147a	hsa-miR-148a-3p
C	hsa-miR-149-5p	hsa-miR-150-5p	hsa-miR-152-3p	hsa-miR-155-5p	hsa-miR-15a-5p	hsa-miR-15b-5p	hsa-miR-16-5p	hsa-miR-17-5p	hsa-miR-181a-5p	hsa-miR-182-5p	hsa-miR-183-5p	hsa-miR-184
D	hsa-miR-185-5p	hsa-miR-186-5p	hsa-miR-187-3p	hsa-miR-18a-5p	hsa-miR-18b-5p	hsa-miR-191-5p	hsa-miR-194-5p	hsa-miR-195-5p	hsa-miR-196a-5p	hsa-miR-19a-3p	hsa-miR-19b-3p	hsa-miR-200a-3p
E	hsa-miR-203a-3p	hsa-miR-205-5p	hsa-miR-206	hsa-miR-20a-5p	hsa-miR-20b-5p	hsa-miR-21-5p	hsa-miR-210-3p	hsa-miR-214-3p	hsa-miR-223-3p	hsa-miR-23b-3p	hsa-miR-26a-5p	hsa-miR-26b-5p
F	hsa-miR-27a-3p	hsa-miR-27b-3p	hsa-miR-298	hsa-miR-299-3p	hsa-miR-29b-3p	hsa-miR-29c-3p	hsa-miR-302a-3p	hsa-miR-30b-5p	hsa-miR-30c-5p	hsa-miR-30e-5p	hsa-miR-31-5p	hsa-miR-325
G	hsa-miR-335-5p	hsa-miR-34a-5p	hsa-miR-363-3p	hsa-miR-379-5p	hsa-miR-383-5p	hsa-miR-409-3p	hsa-miR-451a	hsa-miR-493-3p	hsa-miR-574-3p	hsa-miR-9-5p	hsa-miR-98-5p	hsa-miR-99b-5p
H	cel-miR-39-3p	cel-miR-39-3p	SNORD44 (hsa)	SNORD388 (hsa)	SNORD49A (hsa)	U6 snRNA (v2)	UniSp2	UniSp4	UniSp5	UniSp6	UniSp3	UniSp3

## miRNA Table

Well	miRNA ID	Accession #	Assay Catalog #	Well	miRNA ID	Accession #	Assay Catalog #
A01	hsa-let-7a-5p	MIMAT0000062	YP00205727	E01	hsa-miR-203a-3p	MIMAT0000264	YP00205914
A02	hsa-let-7c-5p	MIMAT0000064	YP00204767	E02	hsa-miR-205-5p	MIMAT0000266	YP00204487
A03	hsa-let-7d-5p	MIMAT0000065	YP00204124	E03	hsa-miR-206	MIMAT0000462	YP00206073
A04	hsa-let-7e-5p	MIMAT0000066	YP00205711	E04	hsa-miR-20a-5p	MIMAT0000075	YP00204292
A05	hsa-let-7g-5p	MIMAT0000414	YP00204565	E05	hsa-miR-20b-5p	MIMAT0001413	YP00204755
A06	hsa-miR-103a-3p	MIMAT0000101	YP00204063	E06	hsa-miR-21-5p	MIMAT0000076	YP00204230
A07	hsa-miR-105-5p	MIMAT0000102	YP00204389	E07	hsa-miR-210-3p	MIMAT0000267	YP00204333
A08	hsa-miR-125a-5p	MIMAT0000443	YP00204339	E08	hsa-miR-214-3p	MIMAT0000271	YP00204510
A09	hsa-miR-125b-5p	MIMAT0000423	YP00205713	E09	hsa-miR-223-3p	MIMAT0000280	YP00205986
A10	hsa-miR-126-3p	MIMAT0000445	YP00204227	E10	hsa-miR-23b-3p	MIMAT0000418	YP02119314
A11	hsa-miR-128-3p	MIMAT0000424	YP00205995	E11	hsa-miR-26a-5p	MIMAT0000082	YP00206023
A12	hsa-miR-130a-3p	MIMAT0000425	YP00204658	E12	hsa-miR-26b-5p	MIMAT0000083	YP00204172
B01	hsa-miR-132-3p	MIMAT0000426	YP00206035	F01	hsa-miR-27a-3p	MIMAT0000084	YP00206038
B02	hsa-miR-134-5p	MIMAT0000447	YP00205989	F02	hsa-miR-27b-3p	MIMAT0000419	YP00205915
B03	hsa-miR-135a-5p	MIMAT0000428	YP00204762	F03	hsa-miR-298	MIMAT0004901	YP00204115
B04	hsa-miR-135b-5p	MIMAT0000758	YP00204130	F04	hsa-miR-299-3p	MIMAT0000687	YP00204702
B05	hsa-miR-138-5p	MIMAT0000430	YP00206078	F05	hsa-miR-29b-3p	MIMAT0000100	YP00204679
B06	hsa-miR-142-3p	MIMAT0000434	YP00204291	F06	hsa-miR-29c-3p	MIMAT0000681	YP00204729
B07	hsa-miR-142-5p	MIMAT0000433	YP00204722	F07	hsa-miR-302a-3p	MIMAT0000684	YP00206059
B08	hsa-miR-143-3p	MIMAT0000435	YP00205992	F08	hsa-miR-30b-5p	MIMAT0000420	YP00204765
B09	hsa-miR-145-5p	MIMAT0000437	YP00204483	F09	hsa-miR-30c-5p	MIMAT0000244	YP00204783
B10	hsa-miR-146a-5p	MIMAT0000449	YP00204688	F10	hsa-miR-30e-5p	MIMAT0000692	YP00204714
B11	hsa-miR-147a	MIMAT0000251	YP00204398	F11	hsa-miR-31-5p	MIMAT0000089	YP00204236
B12	hsa-miR-148a-3p	MIMAT0000243	YP00205867	F12	hsa-miR-325	MIMAT0000771	YP00204464
C01	hsa-miR-149-5p	MIMAT0000450	YP00204321	G01	hsa-miR-335-5p	MIMAT0000765	YP02119293
C02	hsa-miR-150-5p	MIMAT0000451	YP00204660	G02	hsa-miR-34a-5p	MIMAT0000255	YP00204486
C03	hsa-miR-152-3p	MIMAT0000438	YP00204294	G03	hsa-miR-363-3p	MIMAT0000707	YP00204726
C04	hsa-miR-155-5p	MIMAT0000646	YP02119311	G04	hsa-miR-379-5p	MIMAT0000733	YP00205658
C05	hsa-miR-15a-5p	MIMAT0000068	YP00204066	G05	hsa-miR-383-5p	MIMAT0000738	YP00205904
C06	hsa-miR-15b-5p	MIMAT0000417	YP00204243	G06	hsa-miR-409-3p	MIMAT0001639	YP00204358
C07	hsa-miR-16-5p	MIMAT0000069	YP00205702	G07	hsa-miR-451a	MIMAT0001631	YP02119305
C08	hsa-miR-17-5p	MIMAT0000070	YP02119304	G08	hsa-miR-493-3p	MIMAT0003161	YP00204557
C09	hsa-miR-181a-5p	MIMAT0000256	YP00206081	G09	hsa-miR-574-3p	MIMAT0003239	YP00206011
C10	hsa-miR-182-5p	MIMAT0000259	YP00206070	G10	hsa-miR-9-5p	MIMAT0000441	YP00204513
C11	hsa-miR-183-5p	MIMAT0000261	YP00206030	G11	hsa-miR-98-5p	MIMAT0000096	YP00204640
C12	hsa-miR-184	MIMAT0000454	YP00204601	G12	hsa-miR-99b-5p	MIMAT0000689	YP00205983
D01	hsa-miR-185-5p	MIMAT0000455	YP00206037	H01	cel-miR-39-3p	MIMAT0000010	YP00203952
D02	hsa-miR-186-5p	MIMAT0000456	YP00206053	H02	cel-miR-39-3p	MIMAT0000010	YP00203952
D03	hsa-miR-187-3p	MIMAT0000262	YP00204018	H03	SNORD44 (hsa)	N/A	YP00203902
D04	hsa-miR-18a-5p	MIMAT0000072	YP00204207	H04	SNORD388 (hsa)	N/A	YP00203901
D05	hsa-miR-18b-5p	MIMAT0001412	YP00204084	H05	SNORD49A (hsa)	N/A	YP00203904
D06	hsa-miR-191-5p	MIMAT0000440	YP00204306	H06	U6 snRNA (v2)	N/A	YP02119464
D07	hsa-miR-194-5p	MIMAT0000460	YP00204080	H07	UniSp2	N/A	YP00203950
D08	hsa-miR-195-5p	MIMAT0000461	YP00205869	H08	UniSp4	N/A	YP00203953
D09	hsa-miR-196a-5p	MIMAT0000226	YP00204386	H09	UniSp5	N/A	YP00203955
D10	hsa-miR-19a-3p	MIMAT0000073	YP00205862	H10	UniSp6	N/A	YP00203954
D11	hsa-miR-19b-3p	MIMAT0000074	YP00204450	H11	UniSP3	N/A	YP02119288
D12	hsa-miR-200a-3p	MIMAT0000682	YP00204707	H12	UniSP3	N/A	YP02119288

## Functional Groupings

### Leukemia & Lymphoma

Hodgkin's Lymphoma: hsa-miR-125b-5p, hsa-miR-126-3p, hsa-miR-128-3p, hsa-miR-130a-3p, hsa-miR-132-3p, hsa-miR-134-5p, hsa-miR-135a-5p, hsa-miR-135b-5p, hsa-miR-138-5p, hsa-miR-142-3p, hsa-miR-142-5p, hsa-miR-145-5p, hsa-miR-147a, hsa-miR-15b-5p, hsa-miR-181a-5p, hsa-miR-183-5p, hsa-miR-185-5p, hsa-miR-200a-3p, hsa-miR-205-5p, hsa-miR-20b-5p, hsa-miR-21-5p, hsa-miR-23b-3p, hsa-miR-26a-5p, hsa-miR-26b-5p, hsa-miR-27a-3p, hsa-miR-29b-3p, hsa-miR-302a-3p, hsa-miR-30c-5p, hsa-miR-31-5p, hsa-miR-325, hsa-miR-335-5p, hsa-miR-34a-5p, hsa-miR-9-5p.

Primary Effusion Lymphoma: hsa-miR-103a-3p, hsa-miR-142-3p, hsa-miR-148a-3p, hsa-miR-152-3p, hsa-miR-16-5p, hsa-miR-17-5p, hsa-miR-182-5p, hsa-miR-186-5p, hsa-miR-191-5p, hsa-miR-194-5p, hsa-miR-19a-3p, hsa-miR-210-3p, hsa-miR-23b-3p, hsa-miR-26a-5p, hsa-miR-29b-3p, hsa-miR-30e-5p, hsa-miR-34a-5p.

T Cell Leukemia: hsa-miR-132-3p, hsa-miR-17-5p, hsa-miR-18b-5p, hsa-miR-19b-3p, hsa-miR-20b-5p, hsa-miR-363-3p.

Other Leukemia & Lymphoma miRNA: hsa-miR-15a-5p.

### Autoimmune Disorders

Idiopathic Thrombocytopenic Purpura: hsa-miR-196a-5p, hsa-miR-214-3p, hsa-miR-298, hsa-miR-299-3p, hsa-miR-379-5p, hsa-miR-383-5p, hsa-miR-409-3p.

Systemic Lupus Erythematosus: hsa-miR-142-3p, hsa-miR-184, hsa-miR-196a-5p, hsa-miR-21-5p, hsa-miR-298, hsa-miR-299-3p, hsa-miR-383-5p, hsa-miR-409-3p.

### Inflammatory Responses

IL-1 Induced Inflammatory Response: hsa-let-7g-5p, hsa-miR-146a-5p, hsa-miR-195-5p, hsa-miR-26b-5p.

Inflammation Mediators: hsa-miR-155-5p, hsa-miR-203a-3p.

Macrophage Inflammatory Response: hsa-miR-132-3p, hsa-miR-155-5p.

Vascular Inflammation: hsa-miR-126-3p, hsa-miR-155-5p, hsa-miR-21-5p.

Other Inflammatory Response miRNA: hsa-miR-125a-5p.

**Innate Immune Response:** hsa-miR-105-5p, hsa-miR-146a-5p, hsa-miR-19a-3p, hsa-miR-19b-3p.

**Induced in Monocytes by Lipopolysaccharide (LPS):** hsa-let-7e-5p, hsa-miR-132-3p, hsa-miR-146a-5p, hsa-miR-155-5p, hsa-miR-187-3p, hsa-miR-9-5p, hsa-miR-99b-5p.

### Immune Cells

B Cell Differentiation: hsa-miR-150-5p.

Invariant Natural Killer Cell Development: hsa-miR-150-5p, hsa-miR-155-5p.

Lymphocytes: hsa-let-7e-5p, hsa-miR-125a-5p, hsa-miR-142-5p, hsa-miR-143-3p, hsa-miR-145-5p, hsa-miR-146a-5p, hsa-miR-148a-3p, hsa-miR-195-5p, hsa-miR-206, hsa-miR-223-3p, hsa-miR-451a, hsa-miR-493-3p, hsa-miR-574-3p.

Monocytopoiesis: hsa-miR-17-5p, hsa-miR-20a-5p.

Natural Regulatory T Cells: hsa-miR-103a-3p, hsa-miR-142-5p, hsa-miR-149-5p, hsa-miR-150-5p, hsa-miR-15b-5p, hsa-miR-16-5p, hsa-miR-191-5p, hsa-miR-19a-3p, hsa-miR-21-5p, hsa-miR-214-3p, hsa-miR-223-3p, hsa-miR-26a-5p, hsa-miR-27b-3p, hsa-miR-29c-3p, hsa-miR-30b-5p, hsa-miR-30c-5p, hsa-miR-30e-5p.

Th2 Cells: hsa-miR-126-3p.

---

## **Target Relevant Genes**

Targets Cytokines: hsa-miR-98-5p.

Targets Interferons & Receptors: hsa-miR-146a-5p, hsa-miR-223-3p.

Targets Interleukins: hsa-miR-146a-5p, hsa-miR-155-5p, hsa-miR-15a-5p, hsa-miR-17-5p, hsa-miR-181a-5p, hsa-miR-223-3p.

Targets STAT3: hsa-miR-18a-5p.

Targets STAT4: hsa-miR-19a-3p.

Targets STAT5: hsa-miR-19b-3p.

Targets STAT6: hsa-miR-20a-5p.

Targets TNF Alpha: hsa-miR-125b-5p, hsa-miR-155-5p.

## **Signal Transduction**

IL6 / STAT3 Signaling: hsa-let-7a-5p, hsa-let-7c-5p, hsa-let-7d-5p, hsa-miR-21-5p.

NFkB Signaling: hsa-miR-146a-5p, hsa-miR-155-5p.

## Ordering Information

Product	Contents	Cat. no.
miRCURY LNA miRNA Focus PCR Panels	miRCURY LNA miRNA PCR Panels for application-based miRNome profiling, available in 96-well or 384-well format; for SYBR® Green-based detection	339325
miRCURY LNA miRNA miRNome PCR Panels	miRCURY LNA miRNA PCR Panels for PCR-based miRNome profiling, available in 384-well format; for SYBR® Green-based detection	339322
miRCURY LNA miRNA QC PCR Panel	miRCURY LNA miRNA PCR Panel of quality control assays, available in 96-well or 384-well format; for SYBR® Green-based detection	339331
miRCURY LNA miRNA Custom PCR Panels	8 identical, ready-to-use 96- or 384-well plates; each well contains primers sufficient for one 10 µl reaction; for SYBR® Green-based detection	339330
miRCURY LNA Custom PCR Panel Additional Plate	Additional miRCURY LNA Custom PCR Panel plates; set of 4 plates; only available in addition to the base plates ordered through the core product (cat. no. 339330)	339332
miRCURY LNA miRNA PCR Assays	Contains forward and reverse primers for 200 SYBR® Green-based, real-time qPCR reactions, 166 EvaGreen-based digital PCR reactions for Nanoplate 8.5k or 50 EvaGreen-based digital PCR reactions for Nanoplate 26k	339306
miRCURY LNA miRNA Probe PCR Assays	Complete premixed assays containing LNA-enhanced target-specific forward primer and probe. For 200 reactions.	339350
miRCURY LNA miRNA Custom Probe PCR Assays	Custom-designed, target-specific forward primer and probe for any user-defined miRNA target. Complete premixed assay for 200 reactions.	339351

## Related Products

Product	Contents	Cat. no.
miRCURY LNA RT Kit	For 8–64 cDNA synthesis reactions: 5x RT SYBR Green Reaction Buffer, 5x RT Probe Reaction Buffer, 10x RT Enzyme Mix, UniSp6, RNA Spike-in template, RNase-Free Water	339340
RNA Spike-In Kit, For RT	Contains the UniSp2, UniSp4, and UniSp5 RNA Spike-in Template Mix and the cel-miR-39-3p RNA Spike-in Template	339390
miRCURY LNA SYBR® Green PCR Kits (200)	For 200 reactions: 2X miRCURY SYBR Green Master Mix, RNase-Free Water	339345
miRCURY LNA SYBR® Green PCR Kits (600)	For 600 reactions: 2X miRCURY SYBR Green Master Mix, RNase-Free Water	339346
miRCURY LNA SYBR® Green PCR Kits (4000)	For 4000 reactions: 2X miRCURY SYBR Green Master Mix, RNase-Free Water	339347
miRCURY LNA Probe PCR Kit (200)	For 200 reactions: 2X QuantiNova Probe Master Mix, 10X miRCURY Probe Univ. Primer, Rox Reference Dye, RNase-Free Water	339371
miRCURY LNA Probe PCR Kit (800)	For 800 reactions: 2X QuantiNova Probe Master Mix, 10X miRCURY Probe Univ. Primer, Rox Reference Dye, RNase-Free Water	339372
miRCURY LNA Probe PCR Kit (4000)	For 4000 reactions: 2X QuantiNova Probe Master Mix, 10X miRCURY Probe Univ. Primer, Rox Reference Dye, RNase-Free Water	339373
miRCURY LNA miRNA PCR Starter Kit	Two miRCURY LNA PCR Assays of your choice, spike-in control Assay (UniSp6), one candidate endogenous control assay (miR-103-3p) and all reagents for 20 reverse transcription reactions and 100 PCR amplifications; for SYBR® Green-based qPCR detection	339320

---

## Important

The miRCURY LNA™ miRNA PCR Panels are Ready-to-Use and designed for optimal performance with the miRCURY LNA RT Kit and the miRCURY LNA SYBR® Green PCR Kit. The performance of the primer sets will be affected when used in combination with less than optimal reagents. Use the miRCURY LNA miRNA PCR Panel Handbook for experiment setup. RNA work requires specific handling and precautions should be taken to prevent RNase contamination and degradation of the RNA sample and reagents.

## Shipping and storage

The Ready-to-Use miRCURY LNA miRNA PCR Panels are shipped at room temperature and can be stored at 4°C for at least 6 months. For long term storage, it is recommended to place the panels at -20°C. Under these conditions, the LNA PCR primers are stable for at least 6 months after receipt.

## Intended use

miRCURY LNA miRNA PCR Assays are intended for molecular biology applications. This product is not intended for the diagnosis, prevention or treatment of a disease.

## Safety information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheets (SDSs). These are available online in convenient and compact PDF format at **[www.qiagen.com/safety](http://www.qiagen.com/safety)** where you can find, view and print the SDS for each QIAGEN kit and kit component.

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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN®, Sample to Insight®, GeneGlobe®, LNA™ (QIAGEN Group), SYBR® (Life Technologies Corporation). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law. 1107212 05/2017 HB-2376-001 © 2017 QIAGEN, all rights reserved.

---