

miRCURY LNA™ miRNA Focus PCR Panels

Human Apoptosis V2 Product Data Sheet

Cat. no. 339325 YAHS-214Y

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-214YA
C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)	96-well	YAHS-214YC
D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®	96-well	YAHS-214YD
E	Applied Biosystems® models 7900HT (384-well block), ViiA™ 7 (384-well block); Bio-Rad CFX384™	384-well	YAHS-214YE
F	Roche® LightCycler® 480 (96-well block)	96-well	YAHS-214YF
G	Roche® LightCycler® 480 (384-well block)	384-well	YAHS-214YG

Description

The Human Apoptosis V2 miRCURY LNA™ miRNA Focus PCR Panel profiles the expression of 84 miRNAs that regulate programmed cell death by inhibiting pro-apoptotic and anti-apoptotic gene expression. This array provides researchers with a convenient way to quickly analyze the miRNAs most relevant to apoptosis. Apoptosis plays a critical role in normal biological processes requiring cell removal including differentiation, development, and homeostasis. Stress responses (such as heat shock, ischemia, unfolded proteins, and viral infection) cause badly damaged cells to undergo apoptosis. In cell culture, growth factor withdrawal and many known experimental compounds have a similar effect. An acquired defect in apoptosis activation often leads to uncontrolled cell growth, oncogenesis, and cancer. Ligand-bound tumor necrosis factor (TNF) receptors initiate apoptosis by recruiting FADD and other death domain adaptor proteins that then recruit and activate caspases. Environmental stresses trigger BCL2 protein oligomerization and insertion into the mitochondrial membrane, releasing APAF1 and other CARD family members that also oligomerize to recruit and activate caspases. Caspases promote a proteolytic cascade that degrades cellular protein targets, while the IAP protein family directly inhibits caspases. Besides these post-translational events, miRNAs provide another mechanism of regulating apoptosis by attenuating gene expression. This array represents miRNAs experimentally verified to regulate many pro- and anti-apoptotic genes and to stimulate or attenuate apoptosis upon their overexpression or inhibition. Monitoring their expression helps determine the mechanisms behind programmed cell death in any model system and the propensity of a cell type to undergo apoptosis normally. A set of controls present on each 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 real-time PCR, the expression of a focused panel of miRNAs related to apoptosis 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-7e-5p	hsa-let-7g-5p	hsa-miR-1-3p	hsa-miR-101-3p	hsa-miR-106b-5p	hsa-miR-122-5p	hsa-miR-125a-5p	hsa-miR-125b-5p	hsa-miR-128-3p	hsa-miR-1285-3p
B	hsa-miR-133a-3p	hsa-miR-133b	hsa-miR-134-5p	hsa-miR-141-3p	hsa-miR-143-3p	hsa-miR-144-3p	hsa-miR-145-5p	hsa-miR-146a-5p	hsa-miR-149-3p	hsa-miR-153-3p	hsa-miR-15a-5p	hsa-miR-15b-5p
C	hsa-miR-16-5p	hsa-miR-17-5p	hsa-miR-181a-5p	hsa-miR-181b-5p	hsa-miR-181c-5p	hsa-miR-181d-5p	hsa-miR-183-5p	hsa-miR-185-5p	hsa-miR-186-3p	hsa-miR-192-5p	hsa-miR-193a-5p	hsa-miR-193b-3p
D	hsa-miR-194-5p	hsa-miR-195-5p	hsa-miR-200c-3p	hsa-miR-203a-3p	hsa-miR-204-5p	hsa-miR-205-5p	hsa-miR-206	hsa-miR-20a-5p	hsa-miR-21-5p	hsa-miR-210-3p	hsa-miR-212-3p	hsa-miR-214-3p
E	hsa-miR-218-5p	hsa-miR-221-3p	hsa-miR-222-3p	hsa-miR-23a-3p	hsa-miR-24-3p	hsa-miR-25-3p	hsa-miR-26a-5p	hsa-miR-26b-5p	hsa-miR-27a-3p	hsa-miR-29a-3p	hsa-miR-29b-3p	hsa-miR-29c-3p
F	hsa-miR-30a-5p	hsa-miR-30b-5p	hsa-miR-30c-5p	hsa-miR-30d-5p	hsa-miR-30e-5p	hsa-miR-31-5p	hsa-miR-32-5p	hsa-miR-338-3p	hsa-miR-34a-5p	hsa-miR-34c-5p	hsa-miR-365a-3p	hsa-miR-378a-3p
G	hsa-miR-409-3p	hsa-miR-449a	hsa-miR-451a	hsa-miR-491-5p	hsa-miR-497-5p	hsa-miR-512-5p	hsa-miR-542-3p	hsa-miR-7-5p	hsa-miR-708-5p	hsa-miR-9-5p	hsa-miR-92a-3p	hsa-miR-98-5p
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-218-5p	MIMAT0000275	YP00206034
A02	hsa-let-7c-5p	MIMAT0000064	YP00204767	E02	hsa-miR-221-3p	MIMAT0000278	YP00204532
A03	hsa-let-7e-5p	MIMAT0000066	YP00205711	E03	hsa-miR-222-3p	MIMAT0000279	YP00204551
A04	hsa-let-7g-5p	MIMAT0000414	YP00204565	E04	hsa-miR-23a-3p	MIMAT0000078	YP00204772
A05	hsa-miR-1-3p	MIMAT0000416	YP00204344	E05	hsa-miR-24-3p	MIMAT0000080	YP00204260
A06	hsa-miR-101-3p	MIMAT0000099	YP00204786	E06	hsa-miR-25-3p	MIMAT0000081	YP00204361
A07	hsa-miR-106b-5p	MIMAT0000680	YP00205884	E07	hsa-miR-26a-5p	MIMAT0000082	YP00206023
A08	hsa-miR-122-5p	MIMAT0000421	YP00205664	E08	hsa-miR-26b-5p	MIMAT0000083	YP00204172
A09	hsa-miR-125a-5p	MIMAT0000443	YP00204339	E09	hsa-miR-27a-3p	MIMAT0000084	YP00206038
A10	hsa-miR-125b-5p	MIMAT0000423	YP00205713	E10	hsa-miR-29a-3p	MIMAT0000086	YP00204698
A11	hsa-miR-128-3p	MIMAT0000424	YP00205995	E11	hsa-miR-29b-3p	MIMAT0000100	YP00204679
A12	hsa-miR-1285-3p	MIMAT0005876	YP02113268	E12	hsa-miR-29c-3p	MIMAT0000681	YP00204729
B01	hsa-miR-133a-3p	MIMAT0000427	YP00204788	F01	hsa-miR-30a-5p	MIMAT0000087	YP00205695
B02	hsa-miR-133b	MIMAT0000770	YP00206058	F02	hsa-miR-30b-5p	MIMAT0000420	YP00204765
B03	hsa-miR-134-5p	MIMAT0000447	YP00205989	F03	hsa-miR-30c-5p	MIMAT0000244	YP00204783
B04	hsa-miR-141-3p	MIMAT0000432	YP00204504	F04	hsa-miR-30d-5p	MIMAT0000245	YP00206047
B05	hsa-miR-143-3p	MIMAT0000435	YP00205992	F05	hsa-miR-30e-5p	MIMAT0000692	YP00204714
B06	hsa-miR-144-3p	MIMAT0000436	YP00204754	F06	hsa-miR-31-5p	MIMAT0000089	YP00204236
B07	hsa-miR-145-5p	MIMAT0000437	YP00204483	F07	hsa-miR-32-5p	MIMAT0000090	YP00204792
B08	hsa-miR-146a-5p	MIMAT0000449	YP00204688	F08	hsa-miR-33b-3p	MIMAT0000763	YP00204719
B09	hsa-miR-149-3p	MIMAT0004609	YP00204093	F09	hsa-miR-34a-5p	MIMAT0000255	YP00204486
B10	hsa-miR-153-3p	MIMAT0000439	YP00204338	F10	hsa-miR-34c-5p	MIMAT0000686	YP00205659
B11	hsa-miR-15a-5p	MIMAT0000068	YP00204066	F11	hsa-miR-365a-3p	MIMAT0000710	YP00204622
B12	hsa-miR-15b-5p	MIMAT0000417	YP00204243	F12	hsa-miR-378a-3p	MIMAT0000732	YP00205946
C01	hsa-miR-16-5p	MIMAT0000069	YP00205702	G01	hsa-miR-409-3p	MIMAT0001639	YP00204358
C02	hsa-miR-17-5p	MIMAT0000070	YP02119304	G02	hsa-miR-449a	MIMAT0001541	YP00204481
C03	hsa-miR-181a-5p	MIMAT0000256	YP00206081	G03	hsa-miR-451a	MIMAT0001631	YP02119305
C04	hsa-miR-181b-5p	MIMAT0000257	YP00204530	G04	hsa-miR-491-5p	MIMAT0002807	YP00204695
C05	hsa-miR-181c-5p	MIMAT0000258	YP00204683	G05	hsa-miR-497-5p	MIMAT0002820	YP00204354
C06	hsa-miR-181d-5p	MIMAT0002821	YP00204789	G06	hsa-miR-512-5p	MIMAT0002822	YP00204134
C07	hsa-miR-183-5p	MIMAT0000261	YP00206030	G07	hsa-miR-542-3p	MIMAT0003389	YP00205444
C08	hsa-miR-185-5p	MIMAT0000455	YP00206037	G08	hsa-miR-7-5p	MIMAT0000252	YP02119317
C09	hsa-miR-186-3p	MIMAT0004612	YP02110599	G09	hsa-miR-708-5p	MIMAT0004926	YP00204490
C10	hsa-miR-192-5p	MIMAT0000222	YP00204099	G10	hsa-miR-9-5p	MIMAT0000441	YP00204513
C11	hsa-miR-193a-5p	MIMAT0004614	YP00204665	G11	hsa-miR-92a-3p	MIMAT0000092	YP00204258
C12	hsa-miR-193b-3p	MIMAT0002819	YP00204226	G12	hsa-miR-98-5p	MIMAT0000096	YP00204640
D01	hsa-miR-194-5p	MIMAT0000460	YP00204080	H01	cel-miR-39-3p	MIMAT0000010	YP00203952
D02	hsa-miR-195-5p	MIMAT0000461	YP00205869	H02	cel-miR-39-3p	MIMAT0000010	YP00203952
D03	hsa-miR-200c-3p	MIMAT0000617	YP00204482	H03	SNORD44 (hsa)	N/A	YP00203902
D04	hsa-miR-203a-3p	MIMAT0000264	YP00205914	H04	SNORD38B (hsa)	N/A	YP00203901
D05	hsa-miR-204-5p	MIMAT0000265	YP00206072	H05	SNORD49A (hsa)	N/A	YP00203904
D06	hsa-miR-205-5p	MIMAT0000266	YP00204487	H06	U6 snRNA (v2)	N/A	YP02119464
D07	hsa-miR-206	MIMAT0000462	YP00206073	H07	UniSp2	N/A	YP00203950
D08	hsa-miR-20a-5p	MIMAT0000075	YP00204292	H08	UniSp4	N/A	YP00203953
D09	hsa-miR-21-5p	MIMAT0000076	YP00204230	H09	UniSp5	N/A	YP00203955
D10	hsa-miR-210-3p	MIMAT0000267	YP00204333	H10	UniSp6	N/A	YP00203954
D11	hsa-miR-212-3p	MIMAT0000269	YP00204170	H11	UniSP3	N/A	YP02119288
D12	hsa-miR-214-3p	MIMAT0000271	YP00204510	H12	UniSP3	N/A	YP02119288

Functional Groupings

Anti-Apoptotic: hsa-miR-106b-5p, hsa-miR-133a-3p, hsa-miR-141-3p, hsa-miR-181a-5p, hsa-miR-183-5p, hsa-miR-186-3p, hsa-miR-21-5p, hsa-miR-210-3p, hsa-miR-214-3p, hsa-miR-25-3p, hsa-miR-30a-5p, hsa-miR-30b-5p, hsa-miR-30d-5p, hsa-miR-338-3p, hsa-miR-378a-3p, hsa-miR-98-5p.

Pro-Apoptotic: hsa-let-7c-5p, hsa-let-7g-5p, hsa-miR-1-3p, hsa-miR-101-3p, hsa-miR-128-3p, hsa-miR-133b, hsa-miR-143-3p, hsa-miR-144-3p, hsa-miR-149-3p, hsa-miR-153-3p, hsa-miR-15b-5p, hsa-miR-16-5p, hsa-miR-181b-5p, hsa-miR-195-5p, hsa-miR-200c-3p, hsa-miR-203a-3p, hsa-miR-204-5p, hsa-miR-205-5p, hsa-miR-206, hsa-miR-212-3p, hsa-miR-218-5p, hsa-miR-26a-5p, hsa-miR-26b-5p, hsa-miR-27a-3p, hsa-miR-29a-3p, hsa-miR-29c-3p, hsa-miR-30c-5p, hsa-miR-30e-5p, hsa-miR-31-5p, hsa-miR-34a-5p, hsa-miR-365a-3p, hsa-miR-409-3p, hsa-miR-449a, hsa-miR-497-5p, hsa-miR-512-5p, hsa-miR-708-5p.

Either Anti-Apoptotic or Pro-Apoptotic: hsa-let-7a-5p, hsa-let-7e-5p, hsa-miR-23a-3p, hsa-miR-24-3p, hsa-miR-29b-3p, hsa-miR-34c-5p.

Targets Anti-Apoptotic Genes: hsa-let-7c-5p, hsa-let-7g-5p, hsa-miR-1-3p, hsa-miR-101-3p, hsa-miR-122-5p, hsa-miR-133a-3p, hsa-miR-133b, hsa-miR-193b-3p, hsa-miR-194-5p, hsa-miR-204-5p, hsa-miR-491-5p, hsa-miR-512-5p, hsa-miR-542-3p, hsa-miR-7-5p, hsa-miR-9-5p.

Targets Pro-Apoptotic Genes: hsa-miR-134-5p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-32-5p.

Targets Both Anti-Apoptotic & Pro-Apoptotic Genes: hsa-let-7a-5p, hsa-miR-125a-5p, hsa-miR-125b-5p, hsa-miR-1285-3p, hsa-miR-145-5p, hsa-miR-146a-5p, hsa-miR-149-3p, hsa-miR-153-3p, hsa-miR-15a-5p, hsa-miR-15b-5p, hsa-miR-16-5p, hsa-miR-17-5p, hsa-miR-181a-5p, hsa-miR-181b-5p, hsa-miR-181c-5p, hsa-miR-181d-5p, hsa-miR-185-5p, hsa-miR-192-5p, hsa-miR-193a-5p, hsa-miR-195-5p, hsa-miR-203a-3p, hsa-miR-20a-5p, hsa-miR-21-5p, hsa-miR-25-3p, hsa-miR-29a-3p, hsa-miR-29b-3p, hsa-miR-29c-3p, hsa-miR-30a-5p, hsa-miR-30b-5p, hsa-miR-30d-5p, hsa-miR-34a-5p, hsa-miR-451a, hsa-miR-497-5p, hsa-miR-92a-3p.

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 where you can find, view and print the SDS for each QIAGEN kit and kit component.

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