

miRCURY LNA™ miRNA Focus PCR Panels

Human Prostate Cancer Product Data Sheet

Cat. no. 339325 YAHS-212Z

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-212ZA
C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)	96-well	YAHS-212ZC
D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®	96-well	YAHS-212ZD
E	Applied Biosystems® models 7900HT (384-well block), ViiA™ 7 (384-well block); Bio-Rad CFX384™	384-well	YAHS-212ZE
F	Roche® LightCycler® 480 (96-well block)	96-well	YAHS-212ZF
G	Roche® LightCycler® 480 (384-well block)	384-well	YAHS-212ZG

Description

The Human Prostate Cancer miRCURY LNA™ miRNA Focus PCR Panel profiles the expression of 84 miRNAs known to alter their expression during prostate cancer progression and development. This array provides cancer researchers with a convenient way to quickly analyze the miRNAs most relevant to prostate cancer. As an adenocarcinoma or glandular cancer, prostate cancer originates from prostate gland cells. Most prostate cancers grow slowly and respond to androgen ablation therapy (androgen-dependent or AD). However, such tumors eventually become refractory to this therapy, and progress into androgen-independent (castration-resistant) prostate cancers. Perineural invasion, where cancer cells adhere to and wrap around nerves, is the predominant method for prostate cancer local invasion, extraprostatic spread, and metastasis. The molecular mechanisms behind these processes are not well understood, but the discovery of aberrantly regulated miRNA in biopsies from various prostate cancers and in circulation suggests a correlation with the progress of carcinogenesis. This array contains differentially regulated miRNAs based on microarray, real-time RT-PCR, and deep sequencing expression profiling studies involving a broad spectrum of prostate cancer clinical samples and cell lines. The profiling results from this array may yield insights into the molecular mechanisms behind the pathogenesis of prostate cancer. 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 prostate cancer 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-7b-5p	hsa-let-7c-5p	hsa-let-7f-5p	hsa-miR-100-5p	hsa-miR-101-3p	hsa-miR-106b-5p	hsa-miR-125a-5p	hsa-miR-125b-5p	hsa-miR-126-3p	hsa-miR-126-5p	hsa-miR-128-3p
B	hsa-miR-133a-3p	hsa-miR-135a-5p	hsa-miR-135b-5p	hsa-miR-141-3p	hsa-miR-143-3p	hsa-miR-145-5p	hsa-miR-146a-5p	hsa-miR-146b-5p	hsa-miR-148a-3p	hsa-miR-15a-5p	hsa-miR-15b-5p	hsa-miR-16-5p
C	hsa-miR-17-5p	hsa-miR-17-3p	hsa-miR-181a-5p	hsa-miR-181b-5p	hsa-miR-182-5p	hsa-miR-183-5p	hsa-miR-184	hsa-miR-194-5p	hsa-miR-195-5p	hsa-miR-196a-5p	hsa-miR-19b-3p	hsa-miR-200b-3p
D	hsa-miR-200c-3p	hsa-miR-203a-3p	hsa-miR-205-5p	hsa-miR-20a-5p	hsa-miR-20b-5p	hsa-miR-21-5p	hsa-miR-218-5p	hsa-miR-22-3p	hsa-miR-221-3p	hsa-miR-222-3p	hsa-miR-223-3p	hsa-miR-224-5p
E	hsa-miR-23b-3p	hsa-miR-24-3p	hsa-miR-25-3p	hsa-miR-26a-5p	hsa-miR-26b-5p	hsa-miR-27a-3p	hsa-miR-27b-3p	hsa-miR-29a-5p	hsa-miR-29b-3p	hsa-miR-30c-5p	hsa-miR-31-5p	hsa-miR-3163
F	hsa-miR-32-5p	hsa-miR-330-3p	hsa-miR-331-3p	hsa-miR-34a-5p	hsa-miR-34b-3p	hsa-miR-34c-5p	hsa-miR-361-5p	hsa-miR-365a-3p	hsa-miR-3662	hsa-miR-3666	hsa-miR-374b-5p	hsa-miR-375-3p
G	hsa-miR-425-5p	hsa-miR-449a	hsa-miR-455-5p	hsa-miR-494-3p	hsa-miR-616-3p	hsa-miR-7-5p	hsa-miR-9-3p	hsa-miR-92a-3p	hsa-miR-93-5p	hsa-miR-96-5p	hsa-miR-99a-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-23b-3p	MIMAT0000418	YP02119314
A02	hsa-let-7b-5p	MIMAT0000063	YP00204750	E02	hsa-miR-24-3p	MIMAT0000080	YP00204260
A03	hsa-let-7c-5p	MIMAT0000064	YP00204767	E03	hsa-miR-25-3p	MIMAT0000081	YP00204361
A04	hsa-let-7f-5p	MIMAT0000067	YP00204359	E04	hsa-miR-26a-5p	MIMAT0000082	YP00206023
A05	hsa-miR-100-5p	MIMAT0000098	YP00205689	E05	hsa-miR-26b-5p	MIMAT0000083	YP00204172
A06	hsa-miR-101-3p	MIMAT0000099	YP00204786	E06	hsa-miR-27a-3p	MIMAT0000084	YP00206038
A07	hsa-miR-106b-5p	MIMAT0000680	YP00205884	E07	hsa-miR-27b-3p	MIMAT0000419	YP00205915
A08	hsa-miR-125a-5p	MIMAT0000443	YP00204339	E08	hsa-miR-296-5p	MIMAT0000690	YP00204436
A09	hsa-miR-125b-5p	MIMAT0000423	YP00205713	E09	hsa-miR-29b-3p	MIMAT0000100	YP00204679
A10	hsa-miR-126-3p	MIMAT0000445	YP00204227	E10	hsa-miR-30c-5p	MIMAT0000244	YP00204783
A11	hsa-miR-126-5p	MIMAT0000444	YP00206010	E11	hsa-miR-31-5p	MIMAT0000089	YP00204236
A12	hsa-miR-128-3p	MIMAT0000424	YP00205995	E12	hsa-miR-3163	MIMAT0015037	YP02107780
B01	hsa-miR-133a-3p	MIMAT0000427	YP00204788	F01	hsa-miR-32-5p	MIMAT0000090	YP00204792
B02	hsa-miR-135a-5p	MIMAT0000428	YP00204762	F02	hsa-miR-330-3p	MIMAT0000751	YP00204017
B03	hsa-miR-135b-5p	MIMAT0000758	YP00204130	F03	hsa-miR-331-3p	MIMAT0000760	YP00206046
B04	hsa-miR-141-3p	MIMAT0000432	YP00204504	F04	hsa-miR-34a-5p	MIMAT0000255	YP00204486
B05	hsa-miR-143-3p	MIMAT0000435	YP00205992	F05	hsa-miR-34b-3p	MIMAT00004676	YP00204005
B06	hsa-miR-145-5p	MIMAT0000437	YP00204483	F06	hsa-miR-34c-5p	MIMAT0000686	YP00205659
B07	hsa-miR-146a-5p	MIMAT0000449	YP00204688	F07	hsa-miR-361-5p	MIMAT0000703	YP00206054
B08	hsa-miR-146b-5p	MIMAT0002809	YP02119310	F08	hsa-miR-365a-3p	MIMAT0000710	YP00204622
B09	hsa-miR-148a-3p	MIMAT0000243	YP00205867	F09	hsa-miR-3662	MIMAT0018083	YP02118684
B10	hsa-miR-15a-5p	MIMAT0000068	YP00204066	F10	hsa-miR-3666	MIMAT0018088	YP02101822
B11	hsa-miR-15b-5p	MIMAT0000417	YP00204243	F11	hsa-miR-374b-5p	MIMAT00004955	YP00204608
B12	hsa-miR-16-5p	MIMAT0000069	YP00205702	F12	hsa-miR-375-3p	MIMAT0000728	YP00204362
C01	hsa-miR-17-5p	MIMAT0000070	YP02119304	G01	hsa-miR-425-5p	MIMAT0003393	YP00204337
C02	hsa-miR-17-3p	MIMAT0000071	YP00206008	G02	hsa-miR-449a	MIMAT0001541	YP00204481
C03	hsa-miR-181a-5p	MIMAT0000256	YP00206081	G03	hsa-miR-455-5p	MIMAT0003150	YP00204363
C04	hsa-miR-181b-5p	MIMAT0000257	YP00204530	G04	hsa-miR-494-3p	MIMAT0002816	YP00204579
C05	hsa-miR-182-5p	MIMAT0000259	YP00206070	G05	hsa-miR-616-3p	MIMAT00004805	YP00204116
C06	hsa-miR-183-5p	MIMAT0000261	YP00206030	G06	hsa-miR-7-5p	MIMAT0000252	YP02119317
C07	hsa-miR-184	MIMAT0000454	YP00204601	G07	hsa-miR-9-3p	MIMAT0000442	YP00204620
C08	hsa-miR-194-5p	MIMAT0000460	YP00204080	G08	hsa-miR-92a-3p	MIMAT0000092	YP00204258
C09	hsa-miR-195-5p	MIMAT0000461	YP00205869	G09	hsa-miR-93-5p	MIMAT0000093	YP00204715
C10	hsa-miR-196a-5p	MIMAT0000226	YP00204386	G10	hsa-miR-96-5p	MIMAT0000095	YP00204417
C11	hsa-miR-19b-3p	MIMAT0000074	YP00204450	G11	hsa-miR-99a-5p	MIMAT0000097	YP00204521
C12	hsa-miR-200b-3p	MIMAT0000318	YP00206071	G12	hsa-miR-99b-5p	MIMAT0000689	YP00205983
D01	hsa-miR-200c-3p	MIMAT0000617	YP00204482	H01	cel-miR-39-3p	MIMAT0000010	YP00203952
D02	hsa-miR-203a-3p	MIMAT0000264	YP00205914	H02	cel-miR-39-3p	MIMAT0000010	YP00203952
D03	hsa-miR-205-5p	MIMAT0000266	YP00204487	H03	SNORD44 (hsa)	N/A	YP00203902
D04	hsa-miR-20a-5p	MIMAT0000075	YP00204292	H04	SNORD388 (hsa)	N/A	YP00203901
D05	hsa-miR-20b-5p	MIMAT0001413	YP00204755	H05	SNORD49A (hsa)	N/A	YP00203904
D06	hsa-miR-21-5p	MIMAT0000076	YP00204230	H06	U6 snRNA (v2)	N/A	YP02119464
D07	hsa-miR-218-5p	MIMAT0000275	YP00206034	H07	UniSp2	N/A	YP00203950
D08	hsa-miR-22-3p	MIMAT0000077	YP00204606	H08	UniSp4	N/A	YP00203953
D09	hsa-miR-221-3p	MIMAT0000278	YP00204532	H09	UniSp5	N/A	YP00203955
D10	hsa-miR-222-3p	MIMAT0000279	YP00204551	H10	UniSp6	N/A	YP00203954
D11	hsa-miR-223-3p	MIMAT0000280	YP00205986	H11	UniSP3	N/A	YP02119288
D12	hsa-miR-224-5p	MIMAT0000281	YP02119313	H12	UniSP3	N/A	YP02119288

Functional Groupings

Prostate Cancer Versus Normal Tissue or Benign Prostatic Hyperplasia

Upregulated in Prostate Cancer: hsa-let-7b-5p, hsa-let-7f-5p, hsa-miR-106b-5p, hsa-miR-141-3p, hsa-miR-148a-3p, hsa-miR-15b-5p, hsa-miR-181a-5p, hsa-miR-182-5p, hsa-miR-183-5p, hsa-miR-184, hsa-miR-194-5p, hsa-miR-196a-5p, hsa-miR-200c-3p, hsa-miR-20a-5p, hsa-miR-21-5p, hsa-miR-218-5p, hsa-miR-25-3p, hsa-miR-26a-5p, hsa-miR-26b-5p, hsa-miR-32-5p, hsa-miR-375-3p, hsa-miR-425-5p, hsa-miR-96-5p.

Downregulated in Prostate Cancer: hsa-let-7a-5p, hsa-miR-100-5p, hsa-miR-101-3p, hsa-miR-125b-5p, hsa-miR-126-3p, hsa-miR-126-5p, hsa-miR-128-3p, hsa-miR-133a-3p, hsa-miR-143-3p, hsa-miR-145-5p, hsa-miR-17-3p, hsa-miR-181b-5p, hsa-miR-203a-3p, hsa-miR-205-5p, hsa-miR-223-3p, hsa-miR-23b-3p, hsa-miR-27a-3p, hsa-miR-27b-3p, hsa-miR-296-5p, hsa-miR-29b-3p, hsa-miR-31-5p, hsa-miR-330-3p, hsa-miR-34a-5p, hsa-miR-34b-3p, hsa-miR-34c-5p, hsa-miR-449a, hsa-miR-494-3p, hsa-miR-7-5p, hsa-miR-93-5p.

Regulated in Prostate Cancer: hsa-let-7c-5p, hsa-miR-125a-5p, hsa-miR-16-5p, hsa-miR-17-5p, hsa-miR-22-3p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p, hsa-miR-92a-3p, hsa-miR-99b-5p.

Androgen-Independent (Castration Resistant Prostate Cancer) Versus Dependent Cancers

Upregulated in Androgen-Independent Prostate Cancer: hsa-miR-135b-5p, hsa-miR-15a-5p, hsa-miR-184, hsa-miR-21-5p, hsa-miR-221-3p, hsa-miR-30c-5p, hsa-miR-361-5p, hsa-miR-455-5p, hsa-miR-616-3p.

Downregulated in Androgen-Independent Prostate Cancer: hsa-miR-100-5p, hsa-miR-125b-5p, hsa-miR-128-3p, hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-19b-3p, hsa-miR-203a-3p, hsa-miR-23b-3p, hsa-miR-27b-3p, hsa-miR-29b-3p, hsa-miR-331-3p, hsa-miR-365a-3p, hsa-miR-99a-5p.

Regulated in Androgen-Independent Prostate Cancer: hsa-let-7c-5p, hsa-miR-135a-5p, hsa-miR-16-5p, hsa-miR-17-5p, hsa-miR-222-3p, hsa-miR-92a-3p, hsa-miR-99b-5p.

Androgen Receptor-Regulated miRNAs

Upregulated by Androgen Receptor: hsa-miR-148a-3p, hsa-miR-15b-5p, hsa-miR-20a-5p, hsa-miR-20b-5p, hsa-miR-21-5p.

Downregulated by Androgen Receptor: hsa-miR-19b-3p, hsa-miR-29b-3p, hsa-miR-93-5p.

Regulated by Androgen Receptor: hsa-miR-16-5p, hsa-miR-17-5p.

Perineural Invasion

Upregulated during Perineural Invasion: hsa-miR-15a-5p, hsa-miR-181a-5p, hsa-miR-195-5p, hsa-miR-21-5p, hsa-miR-224-5p, hsa-miR-26a-5p, hsa-miR-30c-5p.

Downregulated during Perineural Invasion: hsa-miR-100-5p, hsa-miR-125b-5p, hsa-miR-126-3p, hsa-miR-145-5p, hsa-miR-27a-3p, hsa-miR-27b-3p.

Regulated during Perineural Invasion: hsa-miR-24-3p, hsa-miR-99b-5p.

Aggressive Versus Non-aggressive Prostate Cancer

Upregulated in Aggressive Prostate Cancer: hsa-miR-9-3p.

Downregulated in Aggressive Prostate Cancer: hsa-miR-145-5p, hsa-miR-221-3p, hsa-miR-330-3p, hsa-miR-331-3p, hsa-miR-34c-5p.

Regulated in Aggressive Prostate Cancer: hsa-miR-16-5p.

Blood, Plasma & Serum Markers

Upregulated Prostate Cancer Markers: hsa-miR-141-3p, hsa-miR-200b-3p, hsa-miR-21-5p, hsa-miR-375-3p, hsa-miR-9-3p.

Regulated Prostate Cancer Markers: hsa-miR-221-3p, hsa-miR-26a-5p.

Predicted to Target Prostate Cancer Genes: hsa-miR-3163, hsa-miR-3662, hsa-miR-3666, hsa-miR-374b-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** where you can find, view and print the SDS for each QIAGEN kit and kit component.

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