

# miRCURY LNA™ miRNA Focus PCR Panels

## Rat Neurological Development & Disease

### Product Data Sheet

Cat. no. 339325 YARN-207Z

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	YARN-207ZA
C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)	96-well	YARN-207ZC
D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®	96-well	YARN-207ZD
E	Applied Biosystems® models 7900HT (384-well block), ViiA™ 7 (384-well block); Bio-Rad CFX384™	384-well	YARN-207ZE
F	Roche® LightCycler® 480 (96-well block)	96-well	YARN-207ZF
G	Roche® LightCycler® 480 (384-well block)	384-well	YARN-207ZG

#### Description

The Rat Neurological Development & Disease miRCURY LNA™ miRNA Focus PCR Panel profiles the expression of 84 miRNAs differentially expressed during neuronal development or the progression of neurological diseases. This array provides neuroscience researchers with a convenient way to analyze the miRNAs most relevant to normal nervous system development and/or psychiatric and neurodegenerative disorder progression. Certain miRNAs, such as miR-9, promote neurodevelopment processes such as neurogenesis and synaptic plasticity. Microarray analyses of diseased brain tissues show a variety of significantly dysregulated miRNAs. However, few of these analyses have yet to focus on individual miRNA function and mechanism of action during specific disease processes. The profiling results from this array can serve as a useful marker for neuronal differentiation processes and may yield insights into the molecular mechanisms behind the pathogenesis of neurological disorders. The results can also help enhance basic neurological research since dysregulated developmental processes can lead to neurological diseases, and both often involve similar miRNA-regulated biological pathways. 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 neurological research 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	rno-let-7b-5p	rno-let-7c-5p	rno-let-7d-5p	rno-let-7e-5p	rno-let-7i-5p	rno-miR-101b-3p	rno-miR-105	rno-miR-106b-5p	rno-miR-107-3p	rno-miR-124-3p	rno-miR-125b-5p	rno-miR-126a-5p
B	rno-miR-128-3p	rno-miR-130a-3p	rno-miR-132-3p	rno-miR-133b-3p	rno-miR-134-5p	rno-miR-138-5p	rno-miR-139-5p	rno-miR-140-5p	rno-miR-143-3p	rno-miR-146a-5p	rno-miR-146b-5p	rno-miR-148b-3p
C	rno-miR-150-5p	rno-miR-151-3p	rno-miR-152-3p	rno-miR-15b-5p	rno-miR-181a-5p	rno-miR-181c-5p	rno-miR-181d-5p	rno-miR-191a-5p	rno-miR-194-5p	rno-miR-195-5p	rno-miR-19a-3p	rno-miR-19b-3p
D	rno-miR-203a-3p	rno-miR-20a-5p	rno-miR-20b-5p	rno-miR-212-3p	rno-miR-22-3p	rno-miR-23a-3p	rno-miR-24-3p	rno-miR-26b-5p	rno-miR-27a-3p	rno-miR-28-5p	rno-miR-298-5p	rno-miR-29a-3p
E	rno-miR-29b-3p	rno-miR-29c-3p	rno-miR-30a-5p	rno-miR-30d-5p	rno-miR-30e-5p	rno-miR-33-5p	rno-miR-337-3p	rno-miR-338-3p	rno-miR-339-5p	rno-miR-342-3p	rno-miR-346	rno-miR-34a-5p
F	rno-miR-361-5p	rno-miR-376b-3p	rno-miR-381-3p	rno-miR-382-5p	rno-miR-409a-3p	rno-miR-431	rno-miR-433-3p	rno-miR-455-5p	rno-miR-484	rno-miR-485-5p	rno-miR-488-3p	rno-miR-489-3p
G	rno-miR-499-5p	rno-miR-511-5p	rno-miR-539-5p	rno-miR-598-3p	rno-miR-652-3p	rno-miR-7a-5p	rno-miR-9a-5p	rno-miR-9a-3p	rno-miR-92a-3p	rno-miR-92b-3p	rno-miR-93-5p	rno-miR-98-5p
H	cel-miR-39-3p	cel-miR-39-3p	U6 snRNA (V2)	5S rRNA	RNU5G	RNU1A1	UniSp2	UniSp4	UniSp5	UniSp6	UniSp3	UniSp3

## miRNA Table

Well	miRNA ID	Accession #	Assay Catalog #	Well	miRNA ID	Accession #	Assay Catalog #
A01	rno-let-7b-5p	MIMAT0000063	YP00204750	E01	rno-miR-29b-3p	MIMAT0000100	YP00204679
A02	rno-let-7c-5p	MIMAT0000064	YP00204767	E02	rno-miR-29c-3p	MIMAT0000681	YP00204729
A03	rno-let-7d-5p	MIMAT0000065	YP00204124	E03	rno-miR-30a-5p	MIMAT0000087	YP00205695
A04	rno-let-7e-5p	MIMAT0000066	YP00205711	E04	rno-miR-30d-5p	MIMAT0000245	YP00206047
A05	rno-let-7i-5p	MIMAT0000415	YP00204394	E05	rno-miR-30e-5p	MIMAT0000692	YP00204714
A06	rno-miR-101b-3p	MIMAT0000615	YP02127460	E06	rno-miR-33-5p	MIMAT0000091	YP00205690
A07	rno-miR-105	MIMAT0012825	YP00205105	E07	rno-miR-337-3p	MIMAT0000577	YP00205125
A08	rno-miR-106b-5p	MIMAT0000680	YP00205884	E08	rno-miR-338-3p	MIMAT0000581	YP00205126
A09	rno-miR-107-3p	MIMAT0000104	YP00204468	E09	rno-miR-339-5p	MIMAT0000764	YP00206007
A10	rno-miR-124-3p	MIMAT0000134	YP02119832	E10	rno-miR-342-3p	MIMAT0000753	YP00205625
A11	rno-miR-125b-5p	MIMAT0000423	YP00205713	E11	rno-miR-346	MIMAT0000596	YP00205130
A12	rno-miR-126a-5p	MIMAT0000444	YP00206010	E12	rno-miR-34a-5p	MIMAT0000255	YP00204486
B01	rno-miR-128-3p	MIMAT0000424	YP00205995	F01	rno-miR-361-5p	MIMAT0000703	YP00206054
B02	rno-miR-130a-3p	MIMAT0000425	YP00204658	F02	rno-miR-376b-3p	MIMAT0001092	YP00205058
B03	rno-miR-132-3p	MIMAT0000426	YP00206035	F03	rno-miR-381-3p	MIMAT0003199	YP00205540
B04	rno-miR-133b-3p	MIMAT0000770	YP00206058	F04	rno-miR-382-5p	MIMAT0000737	YP00204169
B05	rno-miR-134-5p	MIMAT0000447	YP00205989	F05	rno-miR-409a-3p	MIMAT0003205	YP00205544
B06	rno-miR-138-5p	MIMAT0000430	YP00206078	F06	rno-miR-431	MIMAT0001625	YP00204737
B07	rno-miR-139-5p	MIMAT0000656	YP00204037	F07	rno-miR-433-3p	MIMAT0001627	YP00204036
B08	rno-miR-140-5p	MIMAT0000431	YP00204540	F08	rno-miR-455-5p	MIMAT0003150	YP00204363
B09	rno-miR-143-3p	MIMAT0000849	YP00205106	F09	rno-miR-484	MIMAT0002174	YP00205636
B10	rno-miR-146a-5p	MIMAT0000449	YP00204688	F10	rno-miR-485-5p	MIMAT0002175	YP02112548
B11	rno-miR-146b-5p	MIMAT0005595	YP00205107	F11	rno-miR-488-3p	MIMAT0003450	YP00205035
B12	rno-miR-148b-3p	MIMAT0000759	YP00204047	F12	rno-miR-489-3p	MIMAT0003113	YP00205553
C01	rno-miR-150-5p	MIMAT0000451	YP00204660	G01	rno-miR-499-5p	MIMAT0002870	YP00205935
C02	rno-miR-151-3p	MIMAT0000161	YP00205163	G02	rno-miR-511-5p	MIMAT0012829	YP00205556
C03	rno-miR-152-3p	MIMAT0000438	YP00204294	G03	rno-miR-539-5p	MIMAT0003163	YP00205656
C04	rno-miR-15b-5p	MIMAT0000417	YP00204243	G04	rno-miR-598-3p	MIMAT0004942	YP00205045
C05	rno-miR-181a-5p	MIMAT0000256	YP00206081	G05	rno-miR-652-3p	MIMAT0003322	YP00204387
C06	rno-miR-181c-5p	MIMAT0000258	YP00204683	G06	rno-miR-7a-5p	MIMAT0000677	YP02119694
C07	rno-miR-181d-5p	MIMAT0002821	YP00204789	G07	rno-miR-9a-5p	MIMAT0000441	YP00204513
C08	rno-miR-191a-5p	MIMAT0000440	YP00204306	G08	rno-miR-9a-3p	MIMAT0000442	YP00204620
C09	rno-miR-194-5p	MIMAT0000460	YP00204080	G09	rno-miR-92a-3p	MIMAT0000539	YP00205947
C10	rno-miR-195-5p	MIMAT0000461	YP00205869	G10	rno-miR-92b-3p	MIMAT0003218	YP00204384
C11	rno-miR-19a-3p	MIMAT0000073	YP00205862	G11	rno-miR-93-5p	MIMAT0000093	YP00204715
C12	rno-miR-19b-3p	MIMAT0000074	YP00204450	G12	rno-miR-98-5p	MIMAT0000096	YP00204640
D01	rno-miR-203a-3p	MIMAT0000264	YP00205914	H01	cel-miR-39-3p	MIMAT0000010	YP00203952
D02	rno-miR-20a-5p	MIMAT0000075	YP00204292	H02	cel-miR-39-3p	MIMAT0000010	YP00203952
D03	rno-miR-20b-5p	MIMAT0001413	YP00204755	H03	U6 snRNA (v2)	N/A	YP02119464
D04	rno-miR-212-3p	MIMAT0000659	YP00206022	H04	5S rRNA	N/A	YP00203906
D05	rno-miR-22-3p	MIMAT0000077	YP00204606	H05	RNU5G	N/A	YP00203908
D06	rno-miR-23a-3p	MIMAT0000078	YP00204772	H06	RNU1A1	N/A	YP00203909
D07	rno-miR-24-3p	MIMAT0000080	YP00204260	H07	UniSp2	N/A	YP00203950
D08	rno-miR-26b-5p	MIMAT0000083	YP00204172	H08	UniSp4	N/A	YP00203953
D09	rno-miR-27a-3p	MIMAT0000084	YP00206038	H09	UniSp5	N/A	YP00203955
D10	rno-miR-28-5p	MIMAT0000085	YP00204322	H10	UniSp6	N/A	YP00203954
D11	rno-miR-298-5p	MIMAT0000376	YP00205092	H11	UniSP3	N/A	YP02119288
D12	rno-miR-29a-3p	MIMAT0000086	YP00204698	H12	UniSP3	N/A	YP02119288

## Functional Groupings

**Neurological Development:** rno-miR-124-3p,rno-miR-125b-5p,rno-miR-132-3p,rno-miR-134-5p,rno-miR-138-5p,rno-miR-9a-3p,rno-miR-9a-5p.

**Autistic Disorders:** rno-miR-106b-5p,rno-miR-128-3p,rno-miR-132-3p,rno-miR-140-5p,rno-miR-146b-5p,rno-miR-148b-3p,rno-miR-15b-5p,rno-miR-181d-5p,rno-miR-212-3p,rno-miR-23a-3p,rno-miR-27a-3p,rno-miR-381-3p,rno-miR-431,rno-miR-484,rno-miR-539-5p,rno-miR-598-3p,rno-miR-652-3p,rno-miR-7a-5p,rno-miR-93-5p.

**Schizophrenia:** rno-let-7d-5p,rno-let-7e-5p,rno-miR-105,rno-miR-106b-5p,rno-miR-107-3p,rno-miR-126a-5p,rno-miR-128-3p,rno-miR-130a-3p,rno-miR-138-5p,rno-miR-150-5p,rno-miR-152-3p,rno-miR-15b-5p,rno-miR-181a-5p,rno-miR-195-5p,rno-miR-19a-3p,rno-miR-20a-5p,rno-miR-20b-5p,rno-miR-212-3p,rno-miR-24-3p,rno-miR-26b-5p,rno-miR-27a-3p,rno-miR-29a-3p,rno-miR-29b-3p,rno-miR-29c-3p,rno-miR-30a-5p,rno-miR-30d-5p,rno-miR-30e-5p,rno-miR-33-5p,rno-miR-338-3p,rno-miR-346,rno-miR-381-3p,rno-miR-409a-3p,rno-miR-455-5p,rno-miR-484,rno-miR-485-5p,rno-miR-489-3p,rno-miR-499-5p,rno-miR-7a-5p,rno-miR-92a-3p,rno-miR-9a-3p,rno-miR-9a-5p.

**Anxiety Disorder:** rno-miR-128-3p.

**Tourette's Syndrome:** rno-miR-24-3p.

**Alzheimer's Disease:** rno-let-7b-5p,rno-let-7c-5p,rno-let-7d-5p,rno-let-7e-5p,rno-let-7i-5p,rno-miR-101b-3p,rno-miR-106b-5p,rno-miR-107-3p,rno-miR-128-3p,rno-miR-139-5p,rno-miR-143-3p,rno-miR-146a-5p,rno-miR-151-3p,rno-miR-15b-5p,rno-miR-181a-5p,rno-miR-181c-5p,rno-miR-194-5p,rno-miR-19b-3p,rno-miR-20a-5p,rno-miR-22-3p,rno-miR-24-3p,rno-miR-26b-5p,rno-miR-27a-3p,rno-miR-28-5p,rno-miR-298-5p,rno-miR-29a-3p,rno-miR-29b-3p,rno-miR-29c-3p,rno-miR-30d-5p,rno-miR-346,rno-miR-34a-5p,rno-miR-361-5p,rno-miR-376b-3p,rno-miR-382-5p,rno-miR-433-3p,rno-miR-485-5p,rno-miR-488-3p,rno-miR-511-5p,rno-miR-92a-3p,rno-miR-92b-3p,rno-miR-93-5p,rno-miR-98-5p,rno-miR-9a-3p,rno-miR-9a-5p.

**Prion Diseases:** rno-let-7b-5p,rno-miR-128-3p,rno-miR-139-5p,rno-miR-146a-5p,rno-miR-191a-5p,rno-miR-203a-3p,rno-miR-337-3p,rno-miR-338-3p,rno-miR-339-5p,rno-miR-342-3p.

**Huntington's Disease:** rno-miR-124-3p,rno-miR-132-3p,rno-miR-29a-3p,rno-miR-29b-3p,rno-miR-9a-3p,rno-miR-9a-5p.

**Parkinson's Disease:** rno-miR-133b-3p,rno-miR-433-3p,rno-miR-7a-5p.

**Spinocerebellar Ataxia 1:** rno-miR-101b-3p,rno-miR-130a-3p,rno-miR-19b-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

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## 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.

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