

# miRCURY LNA™ miRNA Focus PCR Panels

## Mouse Neurological Development & Disease

### Product Data Sheet

Cat. no. 339325 YAMM-207Y

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	YAMM-207YA
C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)	96-well	YAMM-207YC
D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®	96-well	YAMM-207YD
E	Applied Biosystems® models 7900HT (384-well block), ViiA™ 7 (384-well block); Bio-Rad CFX384™	384-well	YAMM-207YE
F	Roche® LightCycler® 480 (96-well block)	96-well	YAMM-207YF
G	Roche® LightCycler® 480 (384-well block)	384-well	YAMM-207YG

#### Description

The Mouse 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	mmu-miR-126a-5p	mmu-let-7c-5p	mmu-let-7d-5p	mmu-let-7e-5p	mmu-let-7f-5p	mmu-miR-101a-3p	rho-miR-101b-3p	mmu-miR-105	mmu-miR-106b-5p	mmu-miR-107-3p	mmu-miR-124-3p	mmu-miR-125b-5p
B	mmu-miR-126a-5p	mmu-miR-128-3p	mmu-miR-130a-3p	mmu-miR-132-3p	mmu-miR-133b-3p	mmu-miR-134-5p	mmu-miR-135b-5p	mmu-miR-138-5p	mmu-miR-139-5p	mmu-miR-140-5p	mmu-miR-146a-5p	mmu-miR-146b-5p
C	mmu-miR-148b-3p	mmu-miR-151-3p	mmu-miR-152-3p	mmu-miR-15a-5p	mmu-miR-15b-5p	mmu-miR-181a-5p	mmu-miR-181a1-3p	mmu-miR-181c-5p	mmu-miR-181d-5p	mmu-miR-191-5p	mmu-miR-193b-3p	mmu-miR-194-5p
D	mmu-miR-195a-5p	mmu-miR-19b-3p	mmu-miR-203-3p	mmu-miR-20a-5p	mmu-miR-20b-5p	mmu-miR-22-3p	mmu-miR-24-3p	mmu-miR-26b-5p	mmu-miR-27a-3p	mmu-miR-28a-5p	mmu-miR-298-5p	mmu-miR-29a-3p
E	mmu-miR-29b-3p	mmu-miR-29c-3p	mmu-miR-302a-5p	mmu-miR-302b-5p	mmu-miR-30a-5p	mmu-miR-30d-5p	mmu-miR-30e-5p	mmu-miR-320-3p	mmu-miR-328-3p	mmu-miR-33-5p	mmu-miR-337-3p	mmu-miR-338-3p
F	mmu-miR-339-5p	mmu-miR-342-3p	mmu-miR-346-5p	mmu-miR-34a-5p	mmu-miR-376b-3p	mmu-miR-381-3p	mmu-miR-409-3p	mmu-miR-431-5p	mmu-miR-433-3p	mmu-miR-455-5p	mmu-miR-484	mmu-miR-485-5p
G	mmu-miR-485-3p	mmu-miR-488-3p	mmu-miR-489-3p	mmu-miR-509-3p	mmu-miR-598-3p	mmu-miR-652-3p	mmu-miR-7a-5p	mmu-miR-9-5p	mmu-miR-9-3p	mmu-miR-92a-3p	mmu-miR-93-5p	mmu-miR-98-5p
H	cel-miR-39-3p	cel-miR-39-3p	U6 snRNA [v2]	5S rRNA	RNU5G	RNU1A1	UnSp2	UnSp4	UnSp5	UnSp6	UnSp3	UnSp3

## miRNA Table

Well	miRNA ID	Accession #	Assay Catalog #	Well	miRNA ID	Accession #	Assay Catalog #
A01	mmu-let-7b-5p	MIMAT0000063	YP00204750	E01	mmu-miR-29b-3p	MIMAT0000100	YP00204679
A02	mmu-let-7c-5p	MIMAT0000064	YP00204767	E02	mmu-miR-29c-3p	MIMAT0000681	YP00204729
A03	mmu-let-7d-5p	MIMAT0000065	YP00204124	E03	mmu-miR-302a-5p	MIMAT0004579	YP00205413
A04	mmu-let-7e-5p	MIMAT0000066	YP00205711	E04	mmu-miR-302b-5p	MIMAT0003373	YP00205414
A05	mmu-let-7f-5p	MIMAT0000415	YP00204394	E05	mmu-miR-30a-5p	MIMAT0000087	YP00205695
A06	mmu-miR-101a-3p	MIMAT0000099	YP00204786	E06	mmu-miR-30d-5p	MIMAT0000245	YP00206047
A07	mo-miR-101b-3p	MIMAT0000615	YP02127460	E07	mmu-miR-30e-5p	MIMAT0000692	YP00204714
A08	mmu-miR-105	MIMAT0004856	YP00205090	E08	mmu-miR-320-3p	MIMAT0000510	YP00206042
A09	mmu-miR-106b-5p	MIMAT0000680	YP00205884	E09	mmu-miR-328-3p	MIMAT0000752	YP00204364
A10	mmu-miR-107-3p	MIMAT0000104	YP00204468	E10	mmu-miR-33-5p	MIMAT0000091	YP00205690
A11	mmu-miR-124-3p	MIMAT0000134	YP02119832	E11	mmu-miR-337-3p	MIMAT0000578	YP02119327
A12	mmu-miR-125b-5p	MIMAT0000423	YP00205713	E12	mmu-miR-338-3p	MIMAT0000763	YP00204719
B01	mmu-miR-126a-5p	MIMAT0000444	YP00206010	F01	mmu-miR-339-5p	MIMAT0000764	YP00206007
B02	mmu-miR-128-3p	MIMAT0000424	YP00205995	F02	mmu-miR-342-3p	MIMAT0000753	YP00205625
B03	mmu-miR-130a-3p	MIMAT0000425	YP00204658	F03	mmu-miR-346-5p	MIMAT0000597	YP00205158
B04	mmu-miR-132-3p	MIMAT0000426	YP00206035	F04	mmu-miR-34a-5p	MIMAT0000255	YP00204486
B05	mmu-miR-133b-3p	MIMAT0000770	YP00206058	F05	mmu-miR-376b-3p	MIMAT0001092	YP00205058
B06	mmu-miR-134-5p	MIMAT0000447	YP00205989	F06	mmu-miR-381-3p	MIMAT0000736	YP00205887
B07	mmu-miR-135b-5p	MIMAT0000758	YP00204130	F07	mmu-miR-409-3p	MIMAT0001639	YP00204358
B08	mmu-miR-138-5p	MIMAT0000430	YP00206078	F08	mmu-miR-431-5p	MIMAT0001625	YP00204737
B09	mmu-miR-139-5p	MIMAT0000656	YP00204037	F09	mmu-miR-433-3p	MIMAT0001627	YP00204036
B10	mmu-miR-140-5p	MIMAT0000431	YP00204540	F10	mmu-miR-455-5p	MIMAT0003150	YP00204363
B11	mmu-miR-146a-5p	MIMAT0000449	YP00204688	F11	mmu-miR-484	MIMAT0002174	YP00205636
B12	mmu-miR-146b-5p	MIMAT0003475	YP02119752	F12	mmu-miR-485-5p	MIMAT0002175	YP02112548
C01	mmu-miR-148b-3p	MIMAT0000759	YP00204047	G01	mmu-miR-485-3p	MIMAT0003129	YP02103407
C02	mmu-miR-151-3p	MIMAT0000161	YP00205163	G02	mmu-miR-488-3p	MIMAT0003450	YP00205035
C03	mmu-miR-152-3p	MIMAT0000438	YP00204294	G03	mmu-miR-489-3p	MIMAT0003112	YP00205036
C04	mmu-miR-15a-5p	MIMAT0000068	YP00204066	G04	mmu-miR-509-3p	MIMAT0004891	YP00205038
C05	mmu-miR-15b-5p	MIMAT0000417	YP00204243	G05	mmu-miR-598-3p	MIMAT0004942	YP00205045
C06	mmu-miR-181a-5p	MIMAT0000256	YP00206081	G06	mmu-miR-652-3p	MIMAT0003322	YP00204387
C07	mmu-miR-181a-1-3p	MIMAT0000270	YP00204110	G07	mmu-miR-7a-5p	MIMAT0000677	YP02119694
C08	mmu-miR-181c-5p	MIMAT0000258	YP00204683	G08	mmu-miR-9-5p	MIMAT0000441	YP00204513
C09	mmu-miR-181d-5p	MIMAT0002821	YP00204789	G09	mmu-miR-9-3p	MIMAT0000442	YP00204620
C10	mmu-miR-191-5p	MIMAT0000440	YP00204306	G10	mmu-miR-92a-3p	MIMAT0000539	YP00205947
C11	mmu-miR-193b-3p	MIMAT0004859	YP00205062	G11	mmu-miR-93-5p	MIMAT0000093	YP00204715
C12	mmu-miR-194-5p	MIMAT0000460	YP00204080	G12	mmu-miR-98-5p	MIMAT0000096	YP00204640
D01	mmu-miR-195a-5p	MIMAT0000461	YP00205869	H01	cel-miR-39-3p	MIMAT0000010	YP00203952
D02	mmu-miR-19b-3p	MIMAT0000074	YP00204450	H02	cel-miR-39-3p	MIMAT0000010	YP00203952
D03	mmu-miR-203-3p	MIMAT0000264	YP00205914	H03	U6 snRNA (v2)	N/A	YP02119464
D04	mmu-miR-20a-5p	MIMAT0000075	YP00204292	H04	5S rRNA	N/A	YP00203906
D05	mmu-miR-20b-5p	MIMAT0001413	YP00204755	H05	RNU5G	N/A	YP00203908
D06	mmu-miR-22-3p	MIMAT0000077	YP00204606	H06	RNU1A1	N/A	YP00203909
D07	mmu-miR-24-3p	MIMAT0000080	YP00204260	H07	UniSp2	N/A	YP00203950
D08	mmu-miR-26b-5p	MIMAT0000083	YP00204172	H08	UniSp4	N/A	YP00203953
D09	mmu-miR-27a-3p	MIMAT0000084	YP00206038	H09	UniSp5	N/A	YP00203955
D10	mmu-miR-28a-5p	MIMAT0000085	YP00204322	H10	UniSp6	N/A	YP00203954
D11	mmu-miR-298-5p	MIMAT0000376	YP00205092	H11	UniSP3	N/A	YP02119288
D12	mmu-miR-29a-3p	MIMAT0000086	YP00204698	H12	UniSP3	N/A	YP02119288

## Functional Groupings

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

**Autistic Disorders:** mmu-miR-106b-5p,mmu-miR-128-3p,mmu-miR-132-3p,mmu-miR-140-5p,mmu-miR-146b-5p,mmu-miR-148b-3p,mmu-miR-15a-5p,mmu-miR-15b-5p,mmu-miR-181d-5p,mmu-miR-193b-3p,mmu-miR-27a-3p,mmu-miR-320-3p,mmu-miR-381-3p,mmu-miR-431-5p,mmu-miR-484,mmu-miR-598-3p,mmu-miR-652-3p,mmu-miR-7a-5p,mmu-miR-93-5p.

**Schizophrenia:** mmu-let-7d-5p,mmu-let-7e-5p,mmu-miR-105,mmu-miR-106b-5p,mmu-miR-107-3p,mmu-miR-126a-5p,mmu-miR-128-3p,mmu-miR-130a-3p,mmu-miR-138-5p,mmu-miR-152-3p,mmu-miR-15a-5p,mmu-miR-15b-5p,mmu-miR-181a-5p,mmu-miR-195a-5p,mmu-miR-20a-5p,mmu-miR-20b-5p,mmu-miR-24-3p,mmu-miR-26b-5p,mmu-miR-27a-3p,mmu-miR-29a-3p,mmu-miR-29b-3p,mmu-miR-29c-3p,mmu-miR-302a-5p,mmu-miR-302b-5p,mmu-miR-30a-5p,mmu-miR-30d-5p,mmu-miR-30e-5p,mmu-miR-33-5p,mmu-miR-338-3p,mmu-miR-346-5p,mmu-miR-381-3p,mmu-miR-409-3p,mmu-miR-455-5p,mmu-miR-484,mmu-miR-485-3p,mmu-miR-489-3p,mmu-miR-7a-5p,mmu-miR-9-3p,mmu-miR-92a-3p.

**Anxiety Disorder:** mmu-miR-128-3p,mmu-miR-485-5p,mmu-miR-509-3p.

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

**Alzheimer's Disease:** mmu-let-7b-5p,mmu-let-7c-5p,mmu-let-7d-5p,mmu-let-7e-5p,mmu-let-7i-5p,mmu-miR-101a-3p,mmu-miR-101b-3p,mmu-miR-106b-5p,mmu-miR-107-3p,mmu-miR-128-3p,mmu-miR-139-5p,mmu-miR-146a-5p,mmu-miR-151-3p,mmu-miR-15a-5p,mmu-miR-15b-5p,mmu-miR-181a-5p,mmu-miR-181c-5p,mmu-miR-194-5p,mmu-miR-19b-3p,mmu-miR-20a-5p,mmu-miR-22-3p,mmu-miR-24-3p,mmu-miR-26b-5p,mmu-miR-27a-3p,mmu-miR-28a-5p,mmu-miR-298-5p,mmu-miR-29a-3p,mmu-miR-29b-3p,mmu-miR-29c-3p,mmu-miR-30d-5p,mmu-miR-320-3p,mmu-miR-328-3p,mmu-miR-346-5p,mmu-miR-34a-5p,mmu-miR-376b-3p,mmu-miR-433-3p,mmu-miR-485-3p,mmu-miR-488-3p,mmu-miR-9-5p,mmu-miR-92a-3p,mmu-miR-93-5p,mmu-miR-98-5p.

**Prion Diseases:** mmu-let-7b-5p,mmu-miR-128-3p,mmu-miR-139-5p,mmu-miR-146a-5p,mmu-miR-181a-1-3p,mmu-miR-191-5p,mmu-miR-203-3p,mmu-miR-320-3p,mmu-miR-337-3p,mmu-miR-338-3p,mmu-miR-339-5p,mmu-miR-342-3p.

**Huntington's Disease:** mmu-miR-124-3p,mmu-miR-132-3p,mmu-miR-135b-5p,mmu-miR-29a-3p,mmu-miR-29b-3p,mmu-miR-9-3p,mmu-miR-9-5p.

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

**Spinocerebellar Ataxia 1:** mmu-miR-101a-3p.

**Spinocerebellar Ataxia 2:** mmu-miR-130a-3p.

**Spinocerebellar Ataxia 3:** mmu-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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