USER GUIDE

applied biosystems by life technologies™

TaqMan® miRNA ABC Purification Kit

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Revision C

life technologies™

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TRADEMARKS

Contents

About This Guide

IMPORTANT! Before using this product, read and understand the information in Appendix D, "Safety" on page 56 in this document.

Revision history

Revision	Date	Description
C	August 2012	• Updates to product recommendations in Appendix A, "Related Products" starting on page 20. • Updates to protocols in Appendix B, "miRNA Quantification and Analysis" starting on page 24. • Addition of miRNA target sequences in Appendix C, "Human Panel Beads" starting on page 33.
B	June 2012	• Expanded protocol to include alternative equipment. • Addition of TaqMan® MicroRNA Arrays protocol on page 27 in Appendix B.
A	March 2012	New document

Purpose

The *TaqMan® miRNA ABC Purification Kit User Guide* (Pub. no. 4473439) provides information about the Life Technologies chemistries, related products and protocols associated with the TaqMan® miRNA ABC Purification Kit.

1 Product Information

Product description

Kit usage

The TaqMan® miRNA ABC (Anti-miRNA Bead Capture) Purification Kit is designed for rapid purification of microRNA (miRNA) from small inputs of all human sample types including body fluids, tissues, and cell cultures. The kits contain buffers and reagents for single-tube isolation of a wide array of human miRNA molecules. The Human Panel A or Panel B Beads are superparamagnetic Dynabeads® covalently bound to a unique set of 377 anti-miRNA oligonucleotides for each panel. The miRNA isolation relies on hybridization of endogenous miRNAs to the corresponding anti-miRNA oligonucleotides attached to the beads.

A common set of control anti-miRNAs, that can be used to capture both exogenously added and endogenous miRNAs, are also bound to the beads. The complete lists of miRNAs isolated by the panels can be found in Appendix C, “Human Panel Beads” on page 33.

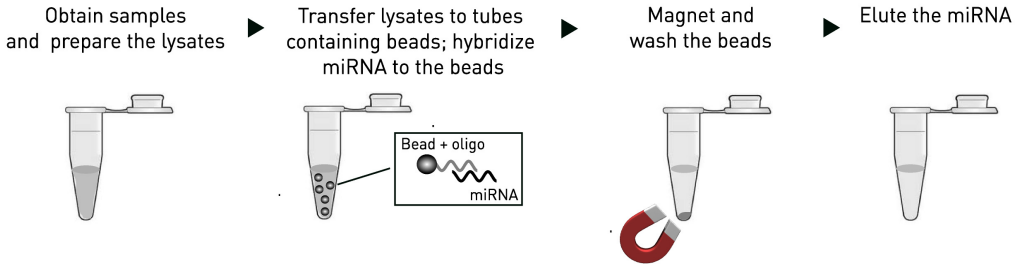
To obtain miRNA sequence information, visit:

www.lifetechnologies.com/taqmanmirna

System overview

The TaqMan® miRNA ABC Purification Kit procedure is illustrated in Figure 1 and can be completed in 75 minutes. Samples are lysed in a buffer that rapidly releases nucleic acids while simultaneously inactivating nucleases in the sample matrix. Human Panel A or B Beads are added to the samples to capture specific miRNAs. The beads and isolated miRNAs are washed to remove DNA, proteins, contaminants, and residual binding solution. The captured miRNAs are then eluted in a small volume of buffer.

Figure 1 Procedure overview



Downstream applications

The miRNAs isolated using the TaqMan® miRNA ABC Purification Kits are ready for conversion into cDNA and downstream analysis using quantitative real-time PCR. Appendix A, "Related Products" on page 20 provides a list of RT primers, PCR primers, kits, and reagents available from Life Technologies that are compatible with the TaqMan® miRNA ABC Purification Kits. See Appendix B, "miRNA Quantification and Analysis" on page 24 for protocols that can be used with these reagents. Visit **www.lifetechnologies.com** for more details.

Kit contents and storage conditions

Each TaqMan® miRNA ABC Purification Kit provides enough reagents for 40 miRNA isolations and contains two boxes. Upon receipt, store the components as indicated in the following table.

TaqMan® miRNA ABC Purification Kit-HUMAN Panel A (Cat. no. 4473087)			
Box	**Component**	**Quantity**	**Storage**
TaqMan® miRNA ABC Purification Buffer Kit (Part no. 4473084)	Lysis Buffer†	12 mL	15°C to 30°C
	ABC Buffer	3 mL‡	
	Wash Buffer 1†	4 mL	
	Wash Buffer 2	3 mL§	
	Elution Buffer	4 mL	
	1.5-mL LoBind tubes (Eppendorf)	50 × 2 packages	
TaqMan® miRNA ABC Purification Bead Kit - HUMAN Panel A (Part no. 4473085)	Human Panel A Beads††	1.1 mL × 3 tubes	2°C to 8°C
TaqMan® miRNA ABC Purification Kit-HUMAN Panel B (Cat. no. 4473088)			
Box	**Component**	**Quantity**	**Storage**
TaqMan® miRNA ABC Purification Buffer Kit (Part no. 4473084)	Lysis Buffer†	12 mL	15°C to 30°C
	ABC Buffer	3 mL‡	
	Wash Buffer 1†	4 mL	
	Wash Buffer 2	3 mL§	
	Elution Buffer	4 mL	
	1.5-mL LoBind tubes (Eppendorf)	50 × 2 packages	
TaqMan® miRNA ABC Purification Bead Kit - HUMAN Panel B (Part no. 4473086)	Human Panel B Beads††	1.1 mL × 3 tubes	2°C to 8°C

† Contains a guanidine salt. Not compatible with disinfectants containing bleach. See Appendix D, "Safety" on page 56.

‡ Add 6 mL Lysis Buffer to the ABC Buffer upon receipt of kit. The final volume will be 9 mL.

§ Add 7 mL of 100% ethanol (user-supplied) to Wash Buffer 2 upon receipt of kit. The final volume will be 10 mL.

†† Human Panel Beads contain ethylene oxide. See Appendix D, "Safety" on page 56.

Materials and equipment required but not included

Description	Supplier	Cat. no.
Magnetic rack for 1.5-mL tubes, such as the DynaMag™-2 magnet	Life Technologies	123-21D
Vortex mixer	MLS†	—
Microcentrifuge	MLS	—
1.5-mL microcentrifuge tubes (LoBind tubes are recommended)	Eppendorf	0030 108.051
Disposable gloves	MLS	—
Pipettors (single, repeater and multichannel) and tips, 1-1000 µL)‡	MLS	—
10-mL serological pipettes and pipetman	MLS	—
100% ethanol, ACS reagent grade or equivalent	MLS	—
Xylene, ACS reagent grade or equivalent	MLS	—
1X PBS, pH 7.4 (sterile)	MLS	—
(*Optional*) Tissue homogenizer or mortar and pestle	MLS	—
(*Optional*) Ultrasonic water bath§	MLS	—
(*Optional*) Thermomixer††	Eppendorf	05-400-200
(*Optional*) Vertical tube rotator	MLS	—
(*Optional*) Incubator (70°C)	MLS	—
(*Optional*) Nuclease-free water	MLS	—
(*Optional*) Exogenous control miRNA	MLS‡‡	—

† Major Laboratory Supplier

‡ Pipette tips should be aerosol-resistant and nuclease-free.

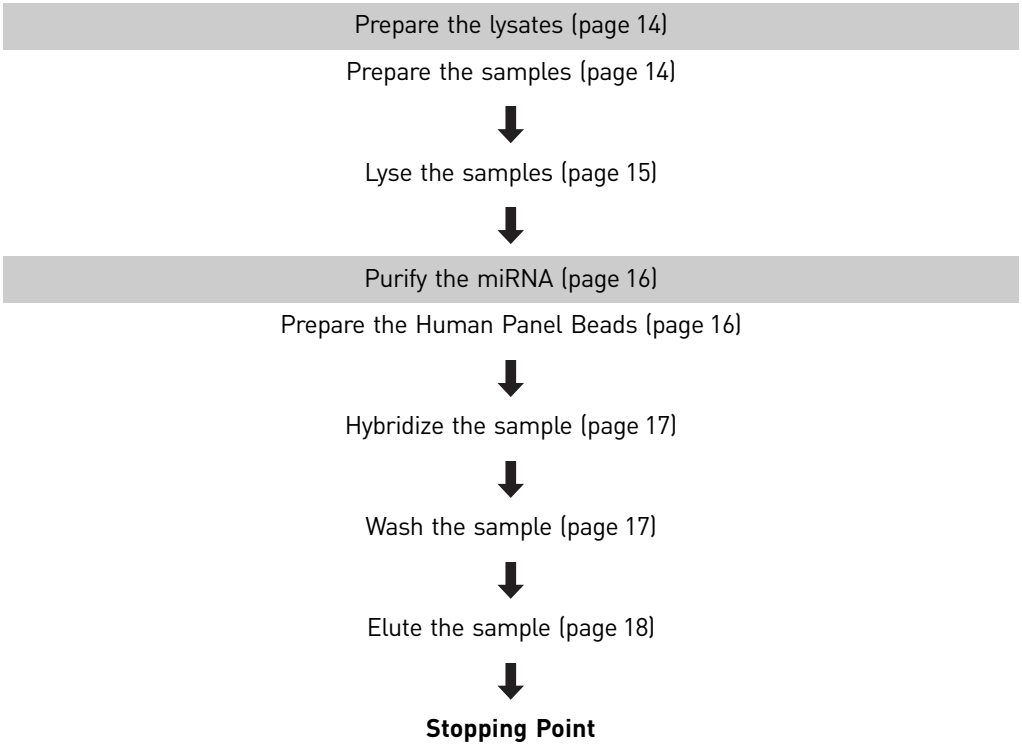
§ Can be used to de-clump the beads for best reproducible results.

†† Thermomixer is recommended for best reproducible results.

‡‡ Order miRNA oligonucleotides from any major oligonucleotide supplier.

2 Methods

Workflow



Before you begin

General procedural guidelines

- Use good laboratory practices to prevent cross-contamination of products.
- Thaw reagents on ice prior to use.
- Follow all necessary safety protocols when handling biological samples. Refer to Appendix D, "Safety" on page 56 for more information.

Guidelines to prevent RNAse contamination

- Wear laboratory gloves for this protocol. Gloves protect you from the reagents and protect the nucleic acid from nucleases that are present on skin.
- Use sterile, disposable, and individually wrapped plastic-ware.
- Use nucleic acid-free pipette tips to handle the reagents, and avoid putting used tips into the reagent containers.
- Clean lab benches and pipettes with an RNAse decontamination solution. For example:

Reagent	Source
RNAse*Zap*® surface decontamination solution	Life Technologies (Cat. no. AM9780)

- When obtaining or storing samples, use good laboratory practices to avoid contamination with nucleases:
  - Work quickly during sample harvesting.
  - Use nuclease-free equipment. Wash equipment well with detergent and rinse thoroughly.
  - Pre-chill any mortar and pestle with dry ice or liquid nitrogen.
  - Refer to the appropriate user guides for proper equipment use.
- When using fresh samples to purify miRNA, keep samples on ice and use immediately.
- If not using samples to purify miRNA right away, freeze samples immediately after collection in liquid nitrogen or on dry ice. Store samples in nuclease-free conditions at –86°C to –68°C.
- Add RNAse inhibitors to prepared samples.

Prepare the buffers

Prior to first use, prepare the ABC Buffer and Wash Buffer 2. The prepared buffers are stable at room temperature (15°C to 30°C) for up to 1 year.

Materials required for this procedure

Materials provided in the TaqMan® miRNA ABC Purification Buffer Kit	Other materials and equipment
• Lysis Buffer • Wash Buffer 2	• 100% ethanol, ACS reagent grade or equivalent • 10-mL serological pipettes and pipetman

CAUTION! The TaqMan® miRNA ABC Purification Lysis Buffer and Wash Buffer 1 contain guanidine hydrochloride. This chemical is not compatible with disinfectants containing bleach. Always wear a laboratory coat, disposable gloves, and eye protection when handling solutions containing this chemical.

CAUTION! Ethanol is added to Wash Buffer 2. Solutions containing ethanol are considered flammable. Use appropriate precautions when using this chemical.

Prepare the ABC Buffer

1. Add 6 mL of Lysis Buffer to the ABC Buffer bottle using a 10-mL pipette.
2. Mix well by inverting 3–4 times.
3. Mark the bottle label to indicate that Lysis Buffer was added. Store the prepared buffer at 15°C to 30°C.

Prepare Wash Buffer 2

1. Add 7 mL of 100% ethanol to the Wash Buffer 2 bottle using a 10-mL pipette.
2. Mix well by inverting 3–4 times.
3. Mark the bottle label to indicate that ethanol was added. Store the prepared buffer at 15°C to 30°C.

Prepare the lysates

Instructions for preparing lysates from human body fluids, cells, and tissues are described in the following section.

Materials required for this procedure

Materials required	Sample type				
	Blood-related samples	Solid Tissue	FFPE	Fluids	Cell cultures
Materials provided in the TaqMan® miRNA ABC Purification Buffer Kit					
Lysis Buffer	X	X	X	X	X
ABC Buffer (prepared)	X	X	X	X	X
Other materials and equipment					
Vortex mixer	X	X	X	X	X
Microcentrifuge	X	X	X	X	X
1.5-mL microcentrifuge tubes (LoBind tubes are recommended)	X	X	X	X	X
100% ethanol, ACS reagent grade or equivalent	—	—	X	—	—
Xylene, ACS reagent grade or equivalent	—	—	X	—	—
1X PBS, pH 7.4 (sterile)	—	—	—	—	X
(*Optional*) Tissue homogenizer or mortar and pestle	—	X	X	—	—
(*Optional*) Exogenous control miRNA	X	X	X	X	X

Prepare the samples

- The quality of miRNA obtained from cells and tissues depends greatly on appropriate isolation, handling, and storage. See "Guidelines to prevent RNAse contamination" on page 12 for more details.
- Follow standard collection procedures for whole blood, plasma, or serum. Use samples that are fresh or stored at –86°C to –68°C in citrate, EDTA, or heparin. Blood lysate refers to whole blood collected in Tempus®, PAXgene® or similar blood lysis tubes.
- For cultured cells, harvest according to standard tissue culture practices. Wash cells twice with 1X PBS to remove media, and collect as a cell pellet.
- (*Optional*) For solid tissue, use a homogenizer or grind tissue prior to lysis for larger tissue sample sizes or for difficult to lyse fibrous or fatty tissue.
- For FFPE tissue:
  - If tissue is on a slide, wash once for 3 minutes with xylene, then air dry completely prior to lysis.

– If tissue is in a tube, wash once with 1 mL xylene and vortex for 10 seconds. Centrifuge tissue at full speed (15,000–20,000 × *g*) for 2 minutes, then carefully remove xylene without disturbing the pellet. Repeat wash and centrifuge steps with 1 mL 100% ethanol, then air dry completely prior to lysis.

Lyse the samples

1. In a 1.5-mL microcentrifuge tube (not provided), prepare each sample type as described in the following table:

Sample type	Sample amount†	Sample preparation	Total volume
Whole blood	10 µL	1. Mix sample with 20 µL Lysis Buffer, and vortex for 30 seconds. Centrifuge briefly. 2. Add 120 µL ABC Buffer, and vortex for 30 seconds. Centrifuge briefly.	~150 µL
Blood lysate	30 µL	Mix sample with 120 µL ABC Buffer, and vortex for 30 seconds. Centrifuge briefly.	~150 µL
Plasma	50 µL	Mix sample with 100 µL ABC Buffer, and vortex for 30 seconds. Centrifuge briefly.	~150 µL
Serum	50 µL	Mix sample with 100 µL ABC Buffer, and vortex for 30 seconds. Centrifuge briefly.	~150 µL
Cultured cells	10 cells to 1×10^6 cells in 50 µL of 1X PBS	Mix sample with 150 µL Lysis Buffer, and vortex for 30 seconds. Centrifuge briefly.	~200 µL
Solid tissue	1–10 mg	Add 100 µL Lysis Buffer, and vortex for 30 seconds. Centrifuge briefly.	~100 µL
FFPE tissue	5–10 µ thick × 3–5 mm in diameter	Add 100 µL Lysis Buffer, and vortex for 30 seconds. Centrifuge briefly. For tissues on glass slides, scrape and transfer tissue to a 1.5-mL LoBind tube containing 100 µL Lysis Buffer.	~100 µL
Saliva	50 µL	1. Centrifuge for 15 minutes at 500–2000 × *g* to remove any debris. 2. Mix sample with 100 µL Lysis Buffer, and vortex for 30 seconds. Centrifuge briefly.	~150 µL
Urine	50 µL	1. Centrifuge for 15 minutes at 500–2000 × *g* to remove any debris. 2. Mix sample with 100 µL ABC Buffer, and vortex for 30 seconds. Centrifuge briefly.	~150 µL

† For additional sample amounts, see "Scale up the experiment" on page 18.

2. (*Optional*) Add 2 µL of 1 nM external control miRNA (user-supplied) into the prepared sample(s), and vortex briefly. Centrifuge the tube(s) briefly to collect the liquid in the bottom of the tube(s). See Appendix C, "Human Panel Beads" on page 33 for a list of control miRNAs that can be captured by the Human Panel Beads.

   Note: We highly recommend adding external miRNA for use as a positive control when performing downstream analysis of the miRNA isolated from this procedure.

3. Place the sample on ice and proceed directly to the next section"Purify the miRNA."

Purify the miRNA

Instructions for isolating miRNA from the prepared lysates are described in the following section.

Materials required for this procedure

Materials provided in the TaqMan® miRNA ABC Purification Kits	Other materials and equipment
• Human Panel Beads • 1.5-mL LoBind tubes (Eppendorf) • Wash Buffer 1 • Wash Buffer 2 (prepared) • ABC Buffer • Elution Buffer	• Vortex mixer • 1.5-mL microcentrifuge tubes (LoBind tubes are recommended) • Magnetic rack for 1.5-mL tubes • Microcentrifuge • (*Optional*) Ultrasonic water bath • (*Optional*) Thermomixer • (*Optional*) Vertical tube rotator • (*Optional*) Incubator (70°C) • (*Optional*) Nuclease-free water

⚠ **CAUTION!** The Human Panel Beads contain ethylene oxide. Always wear a laboratory coat, disposable gloves, and eye protection when handling this chemical.

Prepare the Human Panel Beads

IMPORTANT! Prepare the Human Panel Beads just before use to prevent the beads from drying out.

1. Vortex the beads until suspended in solution.
2. Sonicate the beads using an ultrasonic water bath for 1 minute, followed by vortexing for several seconds to resuspend the beads in solution (*recommended*). Instead of sonicating the beads, you may also vortex the beads at maximum speed for 1 minute using a vortex mixer.
3. Centrifuge the tube(s) briefly to collect the liquid in the bottom of the tube(s).
4. Aliquot 80 µL beads (80×10^6 beads total) into a LoBind 1.5-mL microfuge tube, for each sample prepared in "Lyse the samples" on page 15.

5. Place the tube(s) on a magnetic rack such as the DynaMag™-2 magnet for at least 1 minute to clear the solution. Carefully remove and discard the supernatant without disturbing the pellet. Proceed to the following section "Hybridize the sample." for all sample types, except for FFPE and solid tissues.

   IMPORTANT! Do not discard the bead pellet(s).

6. For FFPE and solid tissues *only*, resuspend the beads in 50 µL ABC Buffer.

Hybridize the sample

1. Transfer each prepared lysate (except for FFPE and solid tissue lysates) from "Lyse the samples" on page 15 to a tube containing prepared Human Panel Beads. See the preceding section "Prepare the Human Panel Beads" on page 16. For FFPE and solid tissue, transfer beads in ABC Buffer to the tube(s) containing the lysates.
2. Vortex the beads until suspended in solution, then centrifuge briefly to collect the liquid in the bottom of the tube(s).
3. Hybridize the beads to miRNA for 40 minutes by shaking the tube(s) in a 30°C Thermomixer at 1200 rpm (*recommended*). You may also hybridize the beads to miRNA by using a vertical tube rotator at 20°C to 35°C instead of the Thermomixer.

   Note: If using the same Thermomixer in "Elute the sample" on page 18, increase the temperature to 70°C before proceeding to the next section "Wash the sample."

Wash the sample

1. Place the tube(s) on a magnetic rack such as the DynaMag™-2 magnet for at least 1 minute to clear the solution. Carefully remove and discard the supernatant without disturbing the pellet(s).

   IMPORTANT! The miRNA is captured by the beads. Save the bead pellet(s).

2. Add 100 µL Wash Buffer 1 to the pellet(s), and vortex briefly to resuspend the beads into solution.
3. Centrifuge briefly to collect the liquid in the bottom of the tube(s), then incubate the beads at room temperature for 1 minute.
4. Place the tube(s) on the magnetic rack for at least 1 minute. When the solution clears, remove and discard the supernatant without disturbing the pellet(s).
5. Add 100 µL Wash Buffer 2 to the pellet(s), and vortex briefly to resuspend the beads into solution.
6. Centrifuge briefly to collect the liquid in the bottom of the tube(s), then incubate the beads at room temperature for 1 minute.
7. Place the tube(s) on the magnetic rack for at least 1 minute. When the solution clears, remove and discard the supernatant without disturbing the pellet(s).
8. Repeat steps 5–7 for a third wash.

9. Centrifuge briefly to collect the liquid in the bottom of the tube(s), then place the tube(s) on the magnetic rack for 10 seconds. Remove any residual liquid using a fine pipette tip without disturbing the pellet(s).

IMPORTANT! Do not discard the bead pellet(s).

Elute the sample

1. Add 100 µL Elution Buffer to the pellet(s), vortex briefly, and then centrifuge the tube(s) briefly to collect the liquid in the bottom of the tube(s).
2. Elute the miRNA from the beads for 3 minutes by shaking the tube(s) in a 70°C Thermomixer at 1200 rpm (*recommended*), or by using a standard 70°C incubator. Immediately place on a magnetic rack such as the DynaMag™-2 magnet for at least 1 minute to clear the solution.
3. Carefully transfer the supernatant into a clean 1.5-mL microcentrifuge tube and place on ice. The sample(s) can be used directly in "Analyze the miRNA" on page 18.

IMPORTANT! The supernatant(s) contains the eluted miRNA. Save the supernatant(s).

4. (*Optional*) Dilute the supernatant(s) for a 96-well plate experiment by adding 500 µL nuclease-free water. See Appendix B, "miRNA Quantification and Analysis" on page 24. Place on ice.

STOPPING POINT Store the miRNA sample(s) at –86°C to –68°C, or proceed directly to "Analyze the miRNA" on page 18. Before use, thaw miRNA on ice. Under these conditions, eluted miRNA is stable for at least 6 months.

Scale up the experiment

For blood and blood-related samples, the TaqMan® miRNA ABC Purification Kit protocol can be scaled up to four times the standard volumes in a single tube. Scale up the volumes of all kit reagents (except Elution Buffer) proportionately to the volume of the starting sample. Use the same volume of Elution Buffer in all experiments. The eluted miRNA can then be diluted to the desired concentration.

Analyze the miRNA

Quantify and profile the isolated miRNA by converting into cDNA using specific reverse transcription (RT) primers, followed by quantitative real-time PCR with the appropriate PCR primer sets. For recommended kits and reagents, refer to Appendix A, "Related Products" on page 20. For miRNA analysis protocols, see Appendix B, "miRNA Quantification and Analysis" on page 24.

Troubleshooting

Observation	Possible causes	Recommended action
Difficulty detecting miRNA in qPCR assays.	RNA degradation due to RNAse contamination during procedure.	See "Guidelines to prevent RNAse contamination" on page 12 for proper handling of sample.
	Inefficient elution of miRNA from the beads.	Follow hybridization, wash, and elution steps on pages 17–18.
	Inefficient washing.	Fully resuspend beads in wash buffers, and completely remove buffers at the end of the washes.
	Beads dried out during procedure.	• Prepare the beads just before use. • Keep the beads suspended in liquid and the tube cap closed in between steps.
	Buffers not diluted as directed.	Prepare buffers as directed on page 13.
	Kit components compromised due to inappropriate storage conditions.	Store reagents as directed in "Kit contents and storage conditions" on page 9.
Able to detect control miRNA, but not sample miRNA, in qPCR assays.	Poor sample quality or degradation due to improper sample storage and preparation prior to lysis.	See "Guidelines to prevent RNAse contamination" on page 12 and "Prepare the samples" on page 14 for proper handling of samples.
	Sample incompletely lysed.	• Homogenize or grind tissue samples prior to lysis. • Increase vortexing time by 30 seconds during lysis.
	Specific miRNAs are normally expressed at undetectable levels	—
Inadequate amount of bead pellet.	Beads are dry or clump together and cannot be aliquoted.	• Prepare beads just before use. • Keep the beads suspended in liquid and the tube cap closed in between steps.
	Bead pellet is disturbed or removed during washing.	• Pellet beads fully before removing wash solutions. • Do not disturb the bead pellet while removing wash solutions.
Buffers form a precipitate upon storage.	Storage at the wrong temperature.	Store reagents as directed in "Kit contents and storage conditions" on page 9.

A

Related Products

TaqMan® MicroRNA Assays and related products

TaqMan® MicroRNA Assays and similar products are highly recommended for profiling and quantitative PCR analysis of miRNA isolated by the TaqMan® miRNA ABC Purification Kits. Each TaqMan® MicroRNA Assay contains a stem-looped RT primer, and a pre-formulated TaqMan® Assay with TaqMan® probe and PCR primer set. The TaqMan® MicroRNA Assays are optimized to work with the MuLVReverse Transcriptase provided in the TaqMan® MicroRNA Reverse Transcription Kits. The TaqMan® miRNA ABC Purification Kit Human Panel A and Human Panel B contain all the assays for the TaqMan® MicroRNA Array Cards A and B v3, along with the matching Megaplex™ Pools allowing the TaqMan® miRNA ABC Purification Kits to be used for miRNA profiling applications. Abbreviated protocols using TaqMan® MicroRNA Assays and Megaplex™ Pools are provided in Appendix B, "miRNA Quantification and Analysis" on page 24. See the *TaqMan® Small RNA Assays Protocol* (Pub. no. 4364031) and the *Megaplex™ Pools Protocol* (Pub. no. 4399721) for more detailed procedures.

For a current list of assays, go to **www.lifetechnologies.com/taqmanmirna**.

TaqMan® MicroRNA Assays

Product	Description	Cat. no.
TaqMan® MicroRNA Assays (inventoried)	150 reactions	4427925
TaqMan® MicroRNA Assays (made-to-order)	75 reactions	4440885
	150 reactions	4440886
	750 reactions	4440887
	2900 reactions	4440888
TaqMan® Array Human MicroRNA A+B Cards Set v3.0	8 arrays	4444913
TaqMan® Array Human MicroRNA A Cards v2.0	4 arrays	4398965
TaqMan® Array Human MicroRNA B Cards v3.0	4 arrays	4444910
TaqMan® OpenArray® Human MicroRNA Panel	1 panel	4461104

Megaplex™ Pools

Product	Description	Cat. no.
Megaplex™ RT Primers, Human Pool Set v3.0	50 reactions	4427925
Megaplex™ RT Primers, Human Pool A Set v2.1	50 reactions	4399966
Megaplex™ RT Primers, Human Pool B v3.0	50 reactions	4444281
Megaplex™ PreAmp Primers, Human Pool Set v3.0	50 reactions	4444748
Megaplex™ PreAmp Primers, Human Pool A v2.1	50 reactions	4399233
Megaplex™ PreAmp Primers, Human Pool B v3.0	50 reactions	4444303
Megaplex™ Primer Pools, Human Pools Set v3.0	50 reactions	4444750
Megaplex™ Primer Pools, Human Pool A v2.1	50 reactions	4401009
Megaplex™ Primer Pools, Human Pool B v3.0	50 reactions	4444749

TaqMan® MicroRNA Reverse Transcription Kits

Product	Description	Cat. no.
TaqMan® MicroRNA Reverse Transcription Kit	200 reactions	4366596
	1000 reactions	4366597

PCR master mixes

The Life Technologies' PCR master mixes listed below are compatible with the TaqMan® MicroRNA Assays and related products.

Product	Description	Cat. no.
TaqMan® Universal PCR Master Mix II, No UNG	1 × 1-mL tube	4440043
	1 × 5-mL bottle	4440040
	2 × 5-mL bottle	4440047
	5 × 5-mL bottle	4440048
	10 × 5-mL bottle	4440049
TaqMan® Universal PCR Master Mix II, with UNG	1 × 1-mL tube	4440042
	1 × 5-mL bottle	4440038
	2 × 5-mL bottle	4440044
	5 × 5-mL bottle	4440045
	10 × 5-mL bottle	4440046
TaqMan® Universal PCR Master Mix, No AmpErase® UNG	1 × 5-mL bottle	4324018
	2 × 5-mL bottle	4364341
	5 × 5-mL bottle	4364343
	10 × 5-mL bottle	4324020
	1 × 50-mL bottle	4326614
TaqMan® Universal PCR Master Mix, with UNG	1 × 5-mL bottle	4304437
	2 × 5-mL bottle	4364338
	5 × 5-mL bottle	4364340
	10 × 5-mL bottle	4305719
	1 × 50-mL bottle	4326708
TaqMan® Fast Advanced Master Mix	1 × 1-mL tube	4444556
	1 × 5-mL bottle	4444557
	2 × 5-mL bottle	4444963
	5 × 5-mL bottle	4444964
	10 × 5-mL bottle	4444965
	1 × 50-mL bottle	4444558
TaqMan® OpenArray® Real-Time PCR Master Mix	1 × 1.5-mL tube	4462159
	1 × 5-mL tube	4462164
TaqMan® PreAmp Master Mix	1 × 1-mL tube	4391128

B miRNA Quantification and Analysis

You can quantify and analyze the miRNA isolated using the TaqMan® miRNA ABC Purification Kits using the following procedures.

Before you begin

General PCR guidelines

- Use a positive-displacement pipette or aerosol-resistant pipette tips.
- Follow proper pipette-dispensing techniques to prevent aerosols.
- Wear clean gloves and a clean lab coat (not previously worn while handling amplified PCR products or used during sample preparation). Change gloves frequently.
- Maintain separate areas and dedicated equipment and supplies for
  - Sample preparation
  - PCR setup
  - PCR amplification
- Open and close all sample tubes carefully. Centrifuge tubes before opening. Try not to splash or spray PCR samples. Clean lab benches and equipment periodically with 10% bleach solution. Use DNAZap™ solution.

Quantitative PCR guidelines

- Use repetitive dispensing pipettors to minimize variability.
- Keep all TaqMan® MicroRNA Assays protected from light and in the freezer until ready for use. Excessive exposure to light may affect the fluorescent probes.
- Prepare the qPCR reaction mix before transferring it to the reaction plate for thermal cycling and fluorescence analysis.

Analysis of isolated miRNA using TaqMan® MicroRNA Assays

The following protocol is for a panel of 96 miRNA assays in a 96-well plate. See Appendix A, "Related Products" on page 20 for product description and ordering information. Refer to the *TaqMan® Small RNA Assays Protocol* (Pub. no. 4364031) for a more detailed procedure.

Perform reverse transcription

1. Prepare the RT master mix and place on ice:

Component	Volume per reaction	Volume for 100 reactions
10X RT Buffer	1.50 µL	150 µL
100 mM dNTP Mix	0.15 µL	15.00 µL
MultiScribe™ reverse transcriptase, 50 U/µL	1.00 µL	100 µL
RNase Inhibitor, 20 U/µL	0.19 µL	19.00 µL
Nuclease-free water	4.16 µL	416 µL
Total	**7.00 µL**	**700 µL**

2. Aliquot 3 µL of each 5X RT primer into each well of a 96-well plate.
3. Dispense 7 µL miRNA RT master mix into each well of the 96-well RT plate.
4. Add 5 µL miRNA sample to each well. The final volume is 15 µL per well.
5. Cover the plate with sealing film, invert six times to mix, and centrifuge briefly to collect liquid in the bottom of the wells.
6. Run the RT reaction using the following thermal-cycling conditions:

Step	Temperature	Time
Hold	16°C	30 minutes
Hold	42°C	30 minutes
Hold	85°C	5 minutes
Hold	4°C	∞

STOPPING POINT Store the plate at –30°C to –10°C, if not used immediately.

Perform the qPCR reaction

1. Prepare the qPCR master mix and place on ice:

Component	Volume per reaction	Volume for 100 reactions
2X TaqMan® Universal Master Mix II or equivalent	10.00 µL	1000 µL
Nuclease-free water	7.67 µL	767 µL
Total	**17.67 µL**	**1767 µL**

2. Dispense 1 µL of 20X TaqMan® MicroRNA Assays into each well of a 96-well plate. Match the location of each miRNA assay with its location on the RT plate.
3. Pipet 17 µL of PCR mix into each well.
4. Transfer 1.33 µL of RT reaction solution obtained from the RT step into the corresponding well of the qPCR plate. The total reaction volume is 20 µL.
5. Set FAM™ dye as the reporter and ROX™ dye as the reference.
6. Run the qPCR reaction using the following thermal-cycling conditions:

Stage	Temperature	Time
Hold	95°C	10 minutes
Cycle	95°C	15 seconds
(40 Cycles)	60°C	1 minute
Hold	4°C	∞

Analyze the qPCR reaction

Refer to the qPCR instrument user guide for instructions on how to analyze the qPCR results.

Analysis of isolated miRNA using TaqMan® Array MicroRNA Cards

Megaplex™ Pools consist of matching primer pools and TaqMan® MicroRNA Arrays. Preamplification of the miRNA isolated with the TaqMan® miRNA ABC Purification Kits is required using Megaplex™ PreAmp Primers. See Appendix A, "Related Products" on page 20 for product description and ordering information. Refer to the *Megaplex™ Pools Protocol* (Pub. no. 4399721) for a more detailed procedure.

Perform the Megaplex™ RT reactions

1. Prepare the RT reaction mix in a 1.5-mL microcentrifuge tube:

Component	Volume per reaction	Volume for 10 reactions†
10× Megaplex™ RT Primers	0.80 µL	9.00 µL
100 mM dNTP Mix	0.20 µL	2.25 µL
MultiScribe™ reverse transcriptase, 50 U/µL	1.50 µL	16.88 µL
10× RT Buffer	0.80 µL	9.00 µL
$MgCl_2$, 25 mM	0.90 µL	10.12 µL
RNase Inhibitor, 20 U/µL	0.10 µL	1.12 µL
Nuclease-free water	0.20 µL	2.25 µL
Total	4.50 µL	50.62 µL

† Includes 12.5% excess for volume loss from pipetting.

2. Invert the tube six times to mix, then centrifuge the tube briefly to collect the liquid in the bottom of the tube.
3. In a 96-well plate or 8-tube strips, pipet 4.5 µL of each RT reaction mix into each well or each tube.
4. Add 3 µL miRNA isolated using the TaqMan® miRNA ABC Purification Kits (or 3 µL of water for the No Template Control reactions) into each well or each tube containing RT reaction mix.
5. Seal the plate or tubes, invert six times to mix, and centrifuge briefly.

   Note: Do not use MicroAmp® Optical Adhesive Film to seal the plate.
6. Incubate the plate on ice for 5 minutes.
7. Run the RT reaction using the following thermal-cycling conditions:

Stage	Temperature	Time
Cycle	16°C	2 minutes
(40 Cycles)	42°C	1 minute
	50°C	1 second
Hold	85°C	5 minutes
Hold	4°C	∞

STOPPING POINT The cDNA can be stored at –30°C to –10°C for at least 1 week.

Perform the preamplification reaction

1. Prepare the PreAmp reaction mix in a 1.5-mL microcentrifuge tube:

PreAmp Reaction Mix Components	Volume per reaction	Volume for 10 reactions†
2X TaqMan® PreAmp Master Mix	12.5 µL	140.62 µL
10X Megaplex™ PreAmp Primers	2.5 µL	28.13 µL
Nuclease-free Water	7.5 µL	84.37 µL
Total	**22.5 µL**	**253.12 µL**

† Includes 12.5% excess for volume loss from pipetting.

2. Invert the tube six times to mix, then centrifuge the tubes briefly.
3. In a 96-well plate or 8-tube strips, pipet 2.5 µL of each RT product into its corresponding well or tube.
4. Dispense 22.5 µL of PreAmp reaction mix into each well of the 96-well plate or 8-tube strips containing the RT product.
5. Seal the plate or tubes, invert six times to mix, and centrifuge briefly.
6. Incubate the plate or tubes on ice for 5 minutes.
7. Run the preamplification reaction using the following thermal-cycling conditions:

Stage	Temperature	Time
Hold	95°C	10 minutes
Hold	55°C	2 minutes
Hold	72°C	2 minutes
Cycle	95°C	4 minutes
(12 Cycles)	60°C	10 minutes
Hold†	99.9°C	10 minutes
Hold	4°C	∞

† Required for enzyme inactivation.

8. Remove the 96-well plate or 8-tube strips from the thermal cycler.
9. Briefly centrifuge the tubes or plate.
10. Add 75 µL of 0.1X TE pH 8.0 to each well or tube.
11. Seal the plate or tubes, invert six times to mix, and centrifuge briefly.

STOPPING POINT The diluted preamplified product can be stored at –30°C to –10°C for at least 1 week.

Perform the real-time PCR reaction

1. Let the TaqMan® MicroRNA Array come to room temperature, then carefully remove it from its packaging.
2. Prepare the PCR reaction mix in a 1.5-mL microcentrifuge tube:

Component	Volume for one array†
2X TaqMan® Universal PCR Master Mix, No AmpErase® UNG	450 µL
Diluted PreAmp product	9.00 µL
Nuclease-free water	441 µL
Total	900 µL

† Includes 12.5% excess for volume loss from pippetting.

> ⚠ **CAUTION! CHEMICAL HAZARD. TaqMan® Universal PCR Master Mix, No AmpErase® UNG** may cause eye and skin irritation. Exposure may cause discomfort if swallowed or inhaled. Read the SDS, and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

3. Invert the tubes to mix, then centrifuge the tubes briefly.

Load and run the MicroRNA Array

Run the array on a 7900HT Fast Real-Time PCR System

Load and run the array on a 7900HT Fast Real-Time PCR System using the 384-well TaqMan® Array Block default thermal-cycling conditions. Refer to the *Applied Biosystems TaqMan® Array User Bulletin* (Pub. no. 4371129).

1. Dispense 100 µL of the PCR reaction mix into each port of the TaqMan® MicroRNA Array.
2. Centrifuge, then seal the array.
3. Import the SDS setup file (SDS.txt) located on the miRNA Card:
   a. Start the SDS v2.2 or later software.
   b. In the main menu, select **File ▸ New.**
   c. In the New Document dialog box, select the following from the drop-down menu:
      - **Relative Quantification ($\Delta\Delta C_T$)**
      - **384-well TaqMan Array**
   d. In the main menu, select **File ▸ Import** to open the new document.
   e. In the Open dialog box, navigate to the Setup.txt file specific for the array being run and click **Import**.
   f. (*Optional*) Save as an SDS 7900 Template (.sdt) file.
4. Load and run the array using the 384-well TaqMan® Array default thermal-cycling conditions.

Run the array on an Applied Biosystems® ViiA™ 7 Real-Time PCR System

Load and run the array on an Applied Biosystems® ViiA™ 7 Real-Time PCR System using the 384-well TaqMan® Array Block default thermal-cycling conditions. Refer to the *Applied Biosystems® ViiA™ 7 Real-Time PCR System Getting Started Guides* (Pub. no. 4441434).

1. Dispense 100 µL of the PCR reaction mix into each port of the TaqMan® MicroRNA Array.
2. Centrifuge, then seal the array.
3. Import the SDS setup file (SDS.txt) located on the miRNA Card:
   a. Start the ViiA™ 7 software and create a new experiment using the Array Card Block and Standard run.
   b. In the main menu, select **File ▸ Import plate setup.**
   c. In the dialog box navigate to the setup .txt file for the array being run and click **Start Import**.
      - **Relative Quantification ($\Delta\Delta C_T$)**
      - **384-well TaqMan Array**
   d. In the main menu, select **File ▸ Import** to open the new document.
   e. In the Open dialog box, navigate to the Setup.txt file specific for the array being run and click **Import**.
   f. (*Optional*) Save as an SDS 7900 Template (.sdt) file.
4. Load and run the array using the 384-well TaqMan® Array default thermal-cycling conditions.

Note: If you are using a PCR System with an automation accessory, load a maximum of 24 TaqMan® Arrays onto the automation accessory at a time. Arrays containing preamplified product can be kept at room temperature for up to 48 hrs (24 arrays × 2 hrs/run = 48 hrs).

Analyze the data

Refer to the instrument user guide for instructions on how to anlayze your data. See the Life Technologies *7900HT Fast Real-Time PCR System Relative Quantitation Using Comparative C_T Getting Started Guide* (Pub. no. 4364016) and the *Applied Biosystems® ViiA™ 7 Real-Time PCR System Getting Started Guides* (Pub. no. 4441434).

To analyze the data for miRNA assays:

1. Set the manual threshhold to 0.2 and use the automatic baseline.
2. View the amplification plots, then review the baseline and threshold settings. Adjust the baseline and threshold settings for individual assays if necessary.

IMPORTANT! The same threshold setting must be used across all samples or arrays within a study.

Tools for data analysis

We recommend the following software for analyzing data generated using the TaqMan® miRNA ABC Purification Kits.

ExpressionSuite Software

ExpressionSuite Software is a simple data analysis tool that uses the comparative C_T ($\Delta\Delta C_T$) method to rapidly and accurately quantify relative gene expression across a large number of genes and samples. Real time data files from supported Applied Biosystems® instruments can be imported to create a study for multi-plate data analysis. The software provides optimal endogenous control selection and normalization options, quality control tools, and tools to visualize fold change, biological significance, and cluster plots for establishing relationships between samples on a per-plate basis.

ExpressionSuite Software is free and can be downloaded from the Life Technologies website at: **www.lifetechnologies.com**.

DataAssist™ Software

DataAssist™ Software is a simple, powerful data analysis tool for sample comparison when using the comparative C_T ($\Delta\Delta C_T$) method for calculating relative quantitation of gene expression. The software uses a filtering procedure for outlier removal and various normalization methods based on lists of single or multiple genes. It provides relative quantification analysis of gene expression through a combination of statistical analysis and interactive visualization. DataAssist™ Software provides a function-rich graphic user interface (GUI) for easy data importation, experimental design setup, and interactive, high-throughput data analysis.

DataAssist™ Software is free and can be downloaded from the Life Technologies website at: **www.lifetechnologies.com**.

RealTime StatMiner® Software

RealTime StatMiner® Software from Integromics is a software analysis package for qPCR experiments that is compatible with all Life Technologies instruments. RealTime StatMiner® Software uses a step-by-step analysis workflow guide that includes parametric, non-parametric, and paired tests for relative quantification of gene expression, as well as 2-way ANOVA for two-factor differential expression analysis.

For more information, visit: **www.integromics.com/genomics-data-analysis/pcr-analysis**.

C

Human Panel Beads

Control miRNAs detected by Human Panel A and B Beads

Both Human Panel A and B Beads contain oligonucleotides that can hybridize and isolate the following set of control miRNAs. To sample lysates, we recommend adding one or more of the exogneous control miRNAs prior to hybridization of the beads. The endogenous control miRNAs are commonly used as endogenous controls in miRNA profiling experiments. Using the appropriate individual qPCR assays, these controls can validate the TaqMan® miRNA ABC Purification Protocol during downstream analysis of the isolated miRNA. Order oligonucleotides from any major oligonucleotide supplier.

To obtain miRNA sequences and TaqMan® miRNA Assay information, visit **www.lifetechnologies.com/taqmanmirna**. Order miRNA oligonucleotides from any major oligonucleotide supplier.

Control miRNAs are listed in the following table:

Control Type	Gene ID/miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
Exogenous	ath-miR159a	000338	ath-miR159a	UUUGGAUUGAAGGGAGCUCUA
Exogenous	asu-miR-2a; cel-miR-2-3p; crm-miR-2; nvi-miR-2b	000195	cel-miR-2	UAUCACAGCCAGCUUUGAUGUGC
Exogenous	cel-miR-39-3p	000200	cel-miR-39	UCACCGGGUGUAAAUCAGCUUG
Exogenous	cel-miR-54-3p	001361	cel-miR-54	UACCCGUAAUCUUCAUAAUCCGAG
Exogenous	cel-miR-238-3p	000248	cel-miR-238	UUUGUACUCCGAUGCCAUUCAGA
Exogenous	cbr-lin-4; cel-lin-4-5p	000258	cel-lin-4	UCCCUGAGACCUCAAGUGUGA
Endogenous	U6 snRNA	001973	U6 snRNA	GUGCUCGCUUCGGCAGCACAUAUACUAAAAU UGGAACGATACAGAGAAGAUUAGCAUGGCCC CUGCGCAAGGAUGACACGCAAAUUCGUGAAG CGUUCCAUAUUUU
Endogenous	RNU44	001094	RNU44	CCUGGAUGAUGAUAGCAAAUGCUGACUGAAC AUGAAGGUCUUAAUUAGCUCUAACUGACU
Endogenous	RNU48	001006	RNU48	GAUGACCCCAGGUAACUCUGAGUGUGUCGC UGAUGCCAUCACCGCAGCGCUCUGACC

† Life Technologies

miRNA molecules detected by Human Panel A Beads

The following table contains a comprehensive list of the specific miRNA molecules detected by the anti-miRNA probes bound to Human Panel A Beads. Human Panel A and Human Panel B contain non-overlapping miRNA primer sets.

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-let-7a-5p	000377	hsa-let-7a	UGAGGUAGUAGGUUGUAUAGUU
hsa-let-7c	000379	hsa-let-7c	UGAGGUAGUAGGUUGUAUGGUU
hsa-let-7d-5p	002283	hsa-let-7d	AGAGGUAGUAGGUUGCAUAGUU
hsa-let-7e-5p	002406	hsa-let-7e	UGAGGUAGGAGGUUGUAUAGUU
hsa-let-7f-5p	000382	hsa-let-7f	UGAGGUAGUAGAUUGUAUAGUU
hsa-let-7g-5p	002282	hsa-let-7g	UGAGGUAGUAGUUUGUACAGUU
hsa-miR-1	002222	hsa-miR-1	UGGAAUGUAAAGAAGUAUGUAU
hsa-miR-9-5p	000583	hsa-miR-9	UCUUUGGUUAUCUAGCUGUAUGA
hsa-miR-10a-5p	000387	hsa-miR-10a	UACCCUGUAGAUCCGAAUUUGUG
hsa-miR-10b-5p	002218	hsa-miR-10b	UACCCUGUAGAACCGAAUUUGUG
hsa-miR-15a-5p	000389	hsa-miR-15a	UAGCAGCACAUAAUGGUUUGUG
hsa-miR-15b-5p	000390	hsa-miR-15b	UAGCAGCACAUCAUGGUUUACA
hsa-miR-16-5p	000391	hsa-miR-16	UAGCAGCACGUAAAUAUUGGCG
hsa-miR-17-5p	002308	hsa-miR-17	CAAAGUGCUUACAGUGCAGGUAG
hsa-miR-18a-5p	002422	hsa-miR-18a	UAAGGUGCAUCUAGUGCAGAUAG
hsa-miR-18b-5p	002217	hsa-miR-18b	UAAGGUGCAUCUAGUGCAGUUAG
hsa-miR-19a-3p	000395	hsa-miR-19a	UGUGCAAAUCUAUGCAAAACUGA
hsa-miR-19b-3p	000396	hsa-miR-19b	UGUGCAAAUCCAUGCAAAACUGA
hsa-miR-20a-5p	000580	hsa-miR-20a	UAAAGUGCUUAUAGUGCAGGUAG
hsa-miR-20b-5p	001014	hsa-miR-20b	CAAAGUGCUCAUAGUGCAGGUAG
hsa-miR-21-5p	00397	hsa-miR-21	UAGCUUAUCAGACUGAUGUUGA
hsa-miR-22-3p	000398	hsa-miR-22	AAGCUGCCAGUUGAAGAACUGU
hsa-miR-23a-3p	000399	hsa-miR-23a	AUCACAUUGCCAGGGAUUUCC
hsa-miR-23b-3p	000400	hsa-miR-23b	AUCACAUUGCCAGGGAUUACC
hsa-miR-24-3p	000402	hsa-miR-24	UGGCUCAGUUCAGCAGGAACAG
hsa-miR-25-3p	000403	hsa-miR-25	CAUUGCACUUGUCUCGGUCUGA
hsa-miR-26a-5p	000405	hsa-miR-26a	UUCAAGUAAUCCAGGAUAGGCU
hsa-miR-26b-5p	000407	hsa-miR-26b	UUCAAGUAAUUCAGGAUAGGU
hsa-miR-27a-3p	000408	hsa-miR-27a	UUCACAGUGGCUAAGUUCCGC
hsa-miR-27b-3p	000409	hsa-miR-27b	UUCACAGUGGCUAAGUUCUGC
hsa-miR-28-3p	002446	hsa-miR-28-3p	CACUAGAUUGUGAGCUCCUGGA
hsa-miR-28-5p	000411	hsa-miR-28-5p	AAGGAGCUCACAGUCUAUUGAG
hsa-miR-29a-3p	002112	hsa-miR-29a	UAGCACCAUCUGAAAUCGGUUA

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-29b-3p	000413	hsa-miR-29b	UAGCACCAUUUGAAAUCAGUGUU
hsa-miR-29c-3p	000587	hsa-miR-29c	UAGCACCAUUUGAAAUCGGUUA
hsa-miR-30b-5p	000602	hsa-miR-30b	UGUAAACAUCCUACACUCAGCU
hsa-miR-30c-5p	000419	hsa-miR-30c	UGUAAACAUCCUACACUCUCAGC
hsa-miR-31-5p	002279	hsa-miR-31	AGGCAAGAUGCUGGCAUAGCU
hsa-miR-32-5p	002109	hsa-miR-32	UAUUGCACAUUACUAAGUUGCA
hsa-miR-33b-5p	002085	hsa-miR-33b	GUGCAUUGCUGUUGCAUUGC
hsa-miR-34a-5p	000426	hsa-miR-34a	UGGCAGUGUCUUAGCUGGUUGU
hsa-miR-34c-5p	000428	hsa-miR-34c-5p	AGGCAGUGUAGUUAGCUGAUUGC
hsa-miR-92a-3p	000431	hsa-miR-92a	UAUUGCACUUGUCCCGGCCUGU
hsa-miR-93-5p	001090	mmu-miR-93	CAAAGUGCUGUUCGUGCAGGUAG
hsa-miR-95	000433	hsa-miR-95	UUCAACGGGUAUUUAUUGAGCA
hsa-miR-96-5p	000186	mmu-miR-96	UUUGGCACUAGCACAUUUUUGCU
hsa-miR-98	000577	hsa-miR-98	UGAGGUAGUAAGUUGUAUUGUU
hsa-miR-99a-5p	000435	hsa-miR-99a	AACCCGUAGAUCCGAUCUUGUG
hsa-miR-99b-5p	000436	hsa-miR-99b	CACCCGUAGAACCGACCUUGCG
hsa-miR-100-5p	000437	hsa-miR-100	AACCCGUAGAUCCGAACUUGUG
hsa-miR-101-3p	002253	hsa-miR-101	UACAGUACUGUGAUAACUGAA
hsa-miR-103a-3p	000439	hsa-miR-103	AGCAGCAUUGUACAGGGCUAUGA
hsa-miR-105-5p	002167	hsa-miR-105	UCAAAUGCUCAGACUCCUGUGGU
hsa-miR-106a-5p	002169	hsa-miR-106a	AAAAGUGCUUACAGUGCAGGUAG
hsa-miR-106b-5p	000442	hsa-miR-106b	UAAAGUGCUGACAGUGCAGAU
hsa-miR-107	000443	hsa-miR-107	AGCAGCAUUGUACAGGGCUAUCA
hsa-miR-122-5p	002245	hsa-miR-122	UGGAGUGUGACAAUGGUGUUUG
hsa-miR-124-3p	001182	mmu-miR-124a	UAAGGCACGCGGUGAAUGCC
hsa-miR-125a-3p	002199	hsa-miR-125a-3p	ACAGGUGAGGUUCUUGGGAGCC
hsa-miR-125a-5p	002198	hsa-miR-125a-5p	UCCCUGAGACCCUUUAACCUGUGA
hsa-miR-125b-5p	000449	hsa-miR-125b	UCCCUGAGACCCUAACUUGUGA
hsa-miR-126-3p	002228	hsa-miR-126	UCGUACCGUGAGUAAUAAUGCG
hsa-miR-127-3p	000452	hsa-miR-127-3p	UCGGAUCCGUCUGAGCUUGGCU
hsa-miR-127-5p	002229	hsa-miR-127-5p	CUGAAGCUCAGAGGGCUCUGAU
hsa-miR-128	002216	hsa-miR-128	UCACAGUGAACCGGUCUCUUU
hsa-miR-129-2-3p	001184	mmu-miR-129-3p	AAGCCCUUACCCCAAAAAGCAU
hsa-miR-129-5p	000590	hsa-miR-129-5p	CUUUUUGCGGUCUGGGCUUGC
hsa-miR-130a-3p	000454	hsa-miR-130a	CAGUGCAAUGUUAAAAGGGCAU
hsa-miR-130b-3p	000456	hsa-miR-130b	CAGUGCAAUGAUGAAAGGGCAU
hsa-miR-132-3p	000457	hsa-miR-132	UAACAGUCUACAGCCAUGGUCG
hsa-miR-133a	002246	hsa-miR-133a	UUUGGUCCCCUUCAACCAGCUG

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-133b	002247	hsa-miR-133b	UUUGGUCCCCUUCAACCAGCUA
hsa-miR-134	001186	mmu-miR-134	UGUGACUGGUUGACCAGAGGGG
hsa-miR-135a-5p	000460	hsa-miR-135a	UAUGGCUUUUUAUUCCUAUGUGA
hsa-miR-135b-5p	002261	hsa-miR-135b	UAUGGCUUUUCAUUCCUAUGUGA
hsa-miR-136-5p	000592	hsa-miR-136	ACUCCAUUUGUUUUGAUGAUGGA
hsa-miR-137	001129	mmu-miR-137	UUAUUGCUUAAGAAUACGCGUAG
hsa-miR-138-5p	002284	hsa-miR-138	AGCUGGUGUUGUGAAUCAGGCCG
hsa-miR-139-3p	002313	hsa-miR-139-3p	GGAGACGCGGCCCUGUUGGAGU
hsa-miR-139-5p	002289	hsa-miR-139-5p	UCUACAGUGCACGUGUCUCCAG
hsa-miR-140-3p	002234	hsa-miR-140-3p	UACCACAGGGUAGAACCACGG
hsa-miR-140-5p	001187	mmu-miR-140	CAGUGGUUUUACCCUAUGGUAG
hsa-miR-141-3p	000463	hsa-miR-141	UAACACUGUCUGGUAAAGAUGG
hsa-miR-142-3p	000464	hsa-miR-142-3p	UGUAGUGUUUCCUACUUUAUGGA
hsa-miR-142-5p	002248	hsa-miR-142-5p	CAUAAAGUAGAAAGCACUACU
hsa-miR-143-3p	002249	hsa-miR-143	UGAGAUGAAGCACUGUAGCUC
hsa-miR-145-5p	002278	hsa-miR-145	GUCCAGUUUUCCCAGGAAUCCCU
hsa-miR-146a-5p	000468	hsa-miR-146a	UGAGAACUGAAUUCCAUGGGUU
hsa-miR-146b-3p	002361	hsa-miR-146b-3p	UGCCCUGUGGACUCAGUUCUGG
hsa-miR-146b-5p	001097	hsa-miR-146b	UGAGAACUGAAUUCCAUAGGCU
hsa-miR-147b	002262	hsa-miR-147b	GUGUGCGGAAAUGCUUCUGCUA
hsa-miR-148a-3p	000470	hsa-miR-148a	UCAGUGCACUACAGAACUUUGU
hsa-miR-148b-3p	000471	hsa-miR-148b	UCAGUGCAUCACAGAACUUUGU
hsa-miR-149-5p	002255	hsa-miR-149	UCUGGCUCCGUGUCUUCACUCCC
hsa-miR-150-5p	000473	hsa-miR-150	UCUCCCAACCCUUGUACCAGUG
hsa-miR-152	000475	hsa-miR-152	UCAGUGCAUGACAGAACUUGG
hsa-miR-153	001191	mmu-miR-153	UUGCAUAGUCACAAAAGUGAUC
hsa-miR-154-5p	000477	hsa-miR-154	UAGGUUAUCCGUGUUGCCUUCG
hsa-miR-181a-5p	000480	hsa-miR-181a	AACAUUCAACGCUGUCGGUGAGU
hsa-miR-181c-5p	000482	hsa-miR-181c	AACAUUCAACCUGUCGGUGAGU
hsa-miR-182-5p	002334	hsa-miR-182	UUUGGCAAUGGUAGAACUCACACU
hsa-miR-183-5p	002269	hsa-miR-183	UAUGGCACUGGUAGAAUUCACU
hsa-miR-184	000485	hsa-miR-184	UGGACGGAGAACUGAUAAGGGU
hsa-miR-185-5p	002271	hsa-miR-185	UGGAGAGAAAGGCAGUUCCUGA
hsa-miR-186-5p	002285	hsa-miR-186	CAAAGAAUUCUCCUUUUGGGCU
hsa-miR-187-3p	001193	mmu-miR-187	UCGUGUCUUGUGUUGCAGCCGG
hsa-miR-188-3p	002106	hsa-miR-188-3p	CUCCCACAUGCAGGGUUUGCA
hsa-miR-190a	000489	hsa-miR-190	UGAUAUGUUUGAUAUAUUAGGU
hsa-miR-191-5p	002299	hsa-miR-191	CAACGGAAUCCCAAAAGCAGCUG

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-192-5p	000491	hsa-miR-192	CUGACCUAUGAAUUGACAGCC
hsa-miR-193a-3p	002250	hsa-miR-193a-3p	AACUGGCCUACAAAGUCCCAGU
hsa-miR-193a-5p	002281	hsa-miR-193a-5p	UGGGUCUUUGCGGGCGAGAUGA
hsa-miR-193b-3p	002367	hsa-miR-193b	AACUGGCCCUCAAAGUCCCGCU
hsa-miR-194-5p	000493	hsa-miR-194	UGUAACAGCAACUCCAUGUGGA
hsa-miR-195-5p	000494	hsa-miR-195	UAGCAGCACAGAAAUAUUGGC
hsa-miR-196b-5p	002215	hsa-miR-196b	UAGGUAGUUUCCUGUUGUUGGG
hsa-miR-197-3p	000497	hsa-miR-197	UUCACCACCUUCUCCACCCAGC
hsa-miR-198	002273	hsa-miR-198	GGUCCAGAGGGGAGAUAGGUUC
hsa-miR-199a-5p	000498	hsa-miR-199a	CCCAGUGUUCAGACUACCUGUUC
hsa-miR-199a-3p; hsa-miR-199b-3p	002304	hsa-miR-199a-3p	ACAGUAGUCUGCACAUUGGUUA
hsa-miR-199b-5p	000500	hsa-miR-199b	CCCAGUGUUUAGACUAUCUGUUC
hsa-miR-200a-3p	000502	hsa-miR-200a	UAACACUGUCUGGUAACGAUGU
hsa-miR-200b-3p	002251	hsa-miR-200b	UAAUACUGCCUGGUAAUGAUGA
hsa-miR-200c-3p	002300	hsa-miR-200c	UAAUACUGCCGGGUAAUGAUGGA
hsa-miR-202-3p	002363	hsa-miR-202	AGAGGUAUAGGGCAUGGGAA
hsa-miR-203	000507	hsa-miR-203	GUGAAAUGUUUAGGACCACUAG
hsa-miR-204-5p	000508	hsa-miR-204	UUCCCUUUGUCAUCCUAUGCCU
hsa-miR-205-5p	000509	hsa-miR-205	UCCUUCAUUCCACCGGAGUCUG
hsa-miR-208b	002290	hsa-miR-208b	AUAAGACGAACAAAAGGUUUGU
hsa-miR-210	000512	hsa-miR-210	CUGUGCGUGUGACAGCGGCUGA
hsa-miR-214-3p	002306	hsa-miR-214	ACAGCAGGCACAGACAGGCAGU
hsa-miR-215	000518	hsa-miR-215	AUGACCUAUGAAUUGACAGAC
hsa-miR-216a	002220	hsa-miR-216a	UAAUCUCAGCUGGCAACUGUGA
hsa-miR-216b	002326	hsa-miR-216b	AAAUCUCUGCAGGCAAAUGUGA
hsa-miR-217	002337	hsa-miR-217	UACUGCAUCAGGAACUGAUUGGA
hsa-miR-218-5p	000521	hsa-miR-218	UUGUGCUUGAUCUAACCAUGU
hsa-miR-219-5p	000522	hsa-miR-219	UGAUUGUCCAAACGCAAUUCU
hsa-miR-221-3p	000524	hsa-miR-221	AGCUACAUUGUCUGCUGGGUUUC
hsa-miR-222-3p	002276	hsa-miR-222	AGCUACAUCUGGCUACUGGGU
hsa-miR-223-3p	002295	hsa-miR-223	UGUCAGUUUGUCAAAUACCCCA
hsa-miR-224-5p	002099	hsa-miR-224	CAAGUCACUAGUGGUUCCGUU
hsa-miR-296-3p	002101	hsa-miR-296-3p	GAGGGUUGGGUGGAGGCUCUCC
hsa-miR-296-5p	000527	hsa-miR-296	AGGGCCCCCCCUCAAUCCUGU
hsa-miR-299-3p	001015	hsa-miR-299-3p	UAUGUGGGAUGGUAAACCGCUU
hsa-miR-299-5p	000600	hsa-miR-299-5p	UGGUUUACCGUCCCACAUACAU
hsa-miR-301a-3p	000528	hsa-miR-301a	CAGUGCAAUAGUAUUGUCAAAGC
hsa-miR-301b	002392	hsa-miR-301b	CAGUGCAAUGAUAUUGUCAAAGC

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hsa-miR-302a-3p	000529	hsa-miR-302a	UAAGUGCUUCCAUGUUUUGGUGA
hsa-miR-302b-3p	000531	hsa-miR-302b	UAAGUGCUUCCAUGUUUUAGUAG
hsa-miR-302c-3p	000533	hsa-miR-302c	UAAGUGCUUCCAUGUUUCAGUGG
hsa-miR-320a	0002277	hsa-miR-320	AAAAGCUGGGUUGAGAGGGCGA
hsa-miR-323-3p	002227	hsa-miR-323-3p	CACAUUACACGGUCGACCUCU
hsa-miR-324-3p	002161	hsa-miR-324-3p	ACUGCCCCAGGUGCUGCUGG
hsa-miR-324-5p	000539	hsa-miR-324-5p	CGCAUCCCCUAGGGCAUUGGUGU
hsa-miR-326	000542	hsa-miR-326	CCUCUGGGCCCUUCCUCCAG
hsa-miR-328	000543	hsa-miR-328	CUGGCCCUCUCUGCCCUUCCGU
hsa-miR-329	110100	hsa-miR-329	AACACACCUGGUUAACCUCUUU
hsa-miR-330-3p	000544	hsa-miR-330-3p	GCAAAGCACACGGCCUGCAGAGA
hsa-miR-330-5p	002230	hsa-miR-330-5p	UCUCUGGGCCUGUGUCUUAGGC
hsa-miR-331-3p	000545	hsa-miR-331	GCCCCUGGGCCUAUCCUAGAA
hsa-miR-331-5p	002233	hsa-miR-331-5p	CUAGGUAUGGUCCCAGGGAUCC
hsa-miR-335-5p	000546	hsa-miR-335	UCAAGAGCAAUAACGAAAAAUGU
hsa-miR-337-5p	002156	hsa-miR-337-5p	GAACGGCUUCAUACAGGAGUU
hsa-miR-338-3p	002252	hsa-miR-338-3p	UCCAGCAUCAGUGAUUUUGUUG
hsa-miR-339-3p	002184	hsa-miR-339-3p	UGAGCGCCUCGACGACAGAGCCG
hsa-miR-339-5p	002257	hsa-miR-339-5p	UCCCUGUCCUCCAGGAGCUCACG
hsa-miR-340-5p	002258	hsa-miR-340	UUAUAAAGCAAUGAGACUGAUU
hsa-miR-155-5p	002623	has-miR-155	UUAAUGCUAAUCGUGAUAGGGGU
hsa-let-7b-5p	002619	hsa-let-7b	UGAGGUAGUAGGUUGUGUGGUU
hsa-miR-342-3p	002260	hsa-miR-342-3p	UCUCACACAGAAAUCGCACCCGU
hsa-miR-342-5p	002147	hsa-miR-342-5p	AGGGGUGCUAUCUGUGAUUGA
hsa-miR-345-5p	002186	hsa-miR-345	GCUGACUCCUAGUCCAGGGCUC
hsa-miR-361-5p	000554	hsa-miR-361	UUAUCAGAAUCUCCAGGGGUAC
hsa-miR-362-3p	002117	hsa-miR-362-3p	AACACACCUAUUCAAGGAUUCA
hsa-miR-362-5p	001273	hsa-miR-362	AAUCCUUGGAACCUAGGUGUGAGU
hsa-miR-363-3p	001271	hsa-miR-363	AAUUGCACGGUAUCCAUCUGUA
hsa-miR-365a-3p; hsa-miR-365b-3p	001020	hsa-miR-365	UAAUGCCCCUAAAAAUCCUUAU
hsa-miR-367-3p	000555	hsa-miR-367	AAUUGCACUUUAGCAAUGGUGA
hsa-miR-369-3p	000557	hsa-miR-369-3p	AAUAAUACAUGGUUGAUCUUU
hsa-miR-369-5p	001021	hsa-miR-369-5p	AGAUCGACCGUGUUAUAUUCGC
hsa-miR-370	002275	hsa-miR-370	GCCUGCUGGGGUGGAACCUGGU
hsa-miR-371-3p	002124	hsa-miR-371-3p	AAGUGCCGCCAUCUUUUGAGUGU
hsa-miR-372	000560	hsa-miR-372	AAAGUGCUGCGACAUUUGAGCGU
hsa-miR-373-3p	000561	hsa-miR-373	GAAGUGCUUCGAUUUUGGGGUGU
hsa-miR-374a-5p	000563	hsa-miR-374	UUAUAAUACAACCUGAUAAGUG

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hsa-miR-374b-5p	001319	mmu-miR-374-5p	AUAUAAUACAACCUGCUAAGUG
hsa-miR-375	000564	hsa-miR-375	UUUGUUCGUUCGGCUCGCGUGA
hsa-miR-376a-3p	000565	hsa-miR-376a	AUCAUAGAGGAAAAUCCACGU
hsa-miR-376b	001102	hsa-miR-376b	AUCAUAGAGGAAAAUCCAUGUU
hsa-miR-377-3p	000566	hsa-miR-377	AUCACACAAAGGCAACUUUUGU
hsa-miR-379-5p	001138	mmu-miR-379	UGGUAGACUAUGGAACGUAGG
hsa-miR-380-3p	000569	hsa-miR-380-3p	UAUGUAAUAUGGUCCACAUCUU
hsa-miR-381	000571	hsa-miR-381	UAUACAAGGGCAAGCUCUCUGU
hsa-miR-382-5p	000572	hsa-miR-382	GAAGUUGUUCGUGGUGGAUUCG
hsa-miR-383	000573	hsa-miR-383	AGAUCAGAAGGUGAUUGUGGCU
hsa-miR-409-5p	002331	hsa-miR-409-5p	AGGUUACCCGAGCAACUUUGCAU
hsa-miR-410	001274	hsa-miR-410	AAUAUAACACAGAUGGCCUGU
hsa-miR-411-5p	001610	hsa-miR-411	UAGUAGACCGUAUAGCGUACG
hsa-miR-422a	002297	hsa-miR-422a	ACUGGACUUAGGGUCAGAAGGC
hsa-miR-423-5p	002340	hsa-miR-423-5p	UGAGGGGCAGAGAGCGAGACUUU
hsa-miR-424-5p	000604	hsa-miR-424	CAGCAGCAAUUCAUGUUUUGAA
hsa-miR-425-5p	001516	hsa-miR-425-5p	AAUGACACGAUCACUCCCGUUGA
hsa-miR-429	001024	hsa-miR-429	UAAUACUGUCUGGUAAAACCGU
hsa-miR-431-5p	001979	hsa-miR-431	UGUCUUGCAGGCCGUCAUGCA
hsa-miR-433	001028	hsa-miR-433	AUCAUGAUGGGCUCCUCGGUGU
hsa-miR-449a	001030	hsa-miR-449	UGGCAGUGUAUUGUUAGCUGGU
hsa-miR-449b-5p	001608	hsa-miR-449b	AGGCAGUGUAUUGUUAGCUGGC
hsa-miR-450a-5p	002303	hsa-miR-450a	UUUUGCGAUGUGUUCCUAAUAU
hsa-miR-450b-3p	002208	hsa-miR-450b-3p	UUGGGAUCAUUUUGCAUCCAUA
hsa-miR-450b-5p	002207	hsa-miR-450b-5p	UUUUGCAAUAUGUUCCUGAAUA
hsa-miR-451a	001141	hsa-miR-451	AAACCGUUACCAUUACUGAGUU
hsa-miR-452-5p	002329	hsa-miR-452	AACUGUUUGCAGAGGAAACUGA
hsa-miR-323b-5p	002318	hsa-miR-453	AGGUUGUCCGUGGUGAGUUCGCA
hsa-miR-454-3p	002323	hsa-miR-454	UAGUGCAAUAUUGCUUAUAGGGU
hsa-miR-455-3p	002244	hsa-miR-455-3p	GCAGUCCAUGGGCAUAUACAC
hsa-miR-455-5p	001280	hsa-miR-455	UAUGUGCCUUUGGACUACAUCG
hsa-miR-483-5p	002338	hsa-miR-483-5p	AAGACGGGAGGAAAGAAGGGAG
hsa-miR-484	001821	hsa-miR-484	UCAGGCUCAGUCCCCUCCCGAU
hsa-miR-485-3p	001277	hsa-miR-485-3p	GUCAUACACGGCUCUCCUCUCU
hsa-miR-485-5p	001036	hsa-miR-485-5p	AGAGGCUGGCCGUGAUGAAUUC
hsa-miR-486-3p	002093	hsa-miR-486-3p	CGGGGCAGCUCAGUACAGGAU
hsa-miR-486-5p	001278	hsa-miR-486	UCCUGUACUGAGCUGCCCCGAG
hsa-miR-487a	001279	hsa-miR-487a	AAUCAUACAGGGACAUCCAGUU

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hsa-miR-487b	001285	hsa-miR-487b	AAUCGUACAGGGUCAUCCACUU
hsa-miR-488-3p	002357	hsa-miR-488	UUGAAAGGCUAUUUCUUGGUC
hsa-miR-489	002358	hsa-miR-489	GUGACAUCACAUAUACGGCAGC
hsa-miR-490-3p	001037	hsa-miR-490	CAACCUGGAGGACUCCAUGCUG
hsa-miR-491-3p	002360	hsa-miR-491-3p	CUUAUGCAAGAUUCCCUUCUAC
hsa-miR-491-5p	001630	hsa-miR-491	AGUGGGGAACCCUUCCAUGAGG
hsa-miR-493-3p	002364	hsa-miR-493	UGAAGGUCUACUGUGUGCCAGG
hsa-miR-494	002365	hsa-miR-494	UGAAACAUACACGGGAAACCUC
hsa-miR-495	001663	hsa-miR-495	AAACAAACAUGGUGCACUUCUU
hsa-miR-496	001953	hsa-miR-496	UGAGUAUUACAUGGCCAAUCUC
hsa-miR-499a-3p	002427	hsa-miR-499-3p	AACAUCACAGCAAGUCUGUGCU
hsa-miR-499a-5p	001352	hsa-miR-499-5p	UUAAGACUUGCAGUGAUGUUU
hsa-miR-500a-5p	002428	hsa-miR-500	UAAUCCUUGCUACCUGGGUGAGA
hsa-miR-501-3p	002435	hsa-miR-501-3p	AAUGCACCCGGGCAAGGAUUCU
hsa-miR-501-5p	001047	hsa-miR-501	AAUCCUUUGUCCCUGGGUGAGA
hsa-miR-502-3p	002083	hsa-miR-502-3p	AAUGCACCUGGGCAAGGAUUCA
hsa-miR-502-5p	001109	hsa-miR-502	AUCCUUGCUAUCUGGGUGCUA
hsa-miR-503	001048	hsa-miR-503	UAGCAGCGGGAACAGUUCUGCAG
hsa-miR-504	002084	hsa-miR-504	AGACCCUGGUCUGCACUCUAUC
hsa-miR-505-3p	002089	hsa-miR-505	CGUCAACACUUGCUGGUUUCCU
hsa-miR-507	001051	hsa-miR-507	UUUUGCACCUUUUGGAGUGAA
hsa-miR-508-3p	001052	hsa-miR-508	UGAUUGUAGCCUUUUGGAGUAGA
hsa-miR-508-5p	002092	hsa-miR-508-5p	UACUCCAGAGGGCGUCACUCAUG
hsa-miR-509-5p	002235	hsa-miR-509-5p	UACUGCAGACAGUGGCAAUCA
hsa-miR-510	002241	hsa-miR-510	UACUCAGGAGAGUGGCAAUCAC
hsa-miR-512-3p	001823	hsa-miR-512-3p	AAGUGCUGUCAUAGCUGAGGUC
hsa-miR-512-5p	001145	hsa-miR-512-5p	CACUCAGCCUUGAGGGCACUUUC
hsa-miR-513-5p	002090	hsa-miR-513-5p	UUCACAGGGAGGUGUCAU
hsa-miR-515-3p	002369	hsa-miR-515-3p	GAGUGCCUUCUUUUGGAGCGUU
hsa-miR-515-5p	001112	hsa-miR-515-5p	UUCUCCAAAAGAAAGCACUUUCUG
hsa-miR-516a-5p	002416	hsa-miR-516a-5p	UUCUCGAGGAAAGAAGCACUUUC
hsa-miR-516b-5p	001150	hsa-miR-516b	AUCUGGAGGUAAGAAGCACUUU
hsa-miR-517a-3p; hsa-miR-517b-3p	002402	hsa-miR-517a	AUCGUGCAUCCCUUUAGAGUGU
hsa-miR-517c-3p	001153	hsa-miR-517c	AUCGUGCAUCCUUUUAGAGUGU
hsa-miR-518a-3p	002397	hsa-miR-518a-3p	GAAAGCGCUUCCCUUUGCUGGA
hsa-miR-518a-5p; hsa-miR-527	002396	hsa-miR-518a-5p	CUGCAAAGGGAAGCCCUUUC
hsa-miR-518b	001156	hsa-miR-518b	CAAAGCGCUCCCCUUUAGAGGU
hsa-miR-518c-3p	002401	hsa-miR-518c	CAAAGCGCUUCUCUUUAGAGUGU

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hsa-miR-518d-3p	001159	hsa-miR-518d	CAAAGCGCUUCCCUUUGGAGC
hsa-miR-518d-5p; hsa-miR-520c-5p;hsa-miR-526a	002389	hsa-miR-518d-5p	CUCUAGAGGGAAGCACUUUCUG
hsa-miR-518e-3p	002395	hsa-miR-518e	AAAGCGCUUCCCUUCAGAGUG
hsa-miR-518f-3p	002388	hsa-miR-518f	GAAAGCGCUUCUCUUUAGAGG
hsa-miR-519a-3p	002415	hsa-miR-519a	AAAGUGCAUCCUUUUAGAGUGU
hsa-miR-519d	002403	hsa-miR-519d	CAAAGUGCCUCCCUUUAGAGUG
hsa-miR-519e-3p	002370	hsa-miR-519e	AAGUGCCUCCUUUUAGAGUGUU
hsa-miR-520a-3p	001167	hsa-miR-520a	AAAGUGCUUCCCUUUGGACUGU
hsa-miR-520a-5p	001168	hsa-miR-520a#	CUCCAGAGGGAAGUACUUUCU
hsa-miR-520d-5p	002393	hsa-miR-520d-5p	CUACAAAGGGAAGCCCUUUC
hsa-miR-520g	001121	hsa-miR-520g	ACAAAGUGCUUCCCUUUAGAGUGU
hsa-miR-521	001122	hsa-miR-521	AACGCACUUCCCUUUAGAGUGU
hsa-miR-522-3p	002413	hsa-miR-522	AAAAUGGUUCCCUUUAGAGUGU
hsa-miR-523-3p	002386	hsa-miR-523	GAACGCGCUUCCCUAUAGAGGGU
hsa-miR-524-5p	001982	hsa-miR-524-5p	CUACAAAGGGAAGCACUUUCUC
hsa-miR-525-3p	002385	hsa-miR-525-3p	GAAGGCGCUUCCCUUUAGAGCG
hsa-miR-525-5p	001174	hsa-miR-525	CUCCAGAGGGAUGCACUUUCU
hsa-miR-526b-5p	002382	hsa-miR-526b	CUCUUGAGGGAAGCACUUUCUGU
hsa-miR-532-3p	002355	hsa-miR-532-3p	CCUCCCACACCCAAGGCUUGCA
hsa-miR-532-5p	001518	hsa-miR-532	CAUGCCUUGAGUGUAGGACCGU
hsa-miR-539-5p	001286	hsa-miR-539	GGAGAAAUUAUCCUUGGUGUGU
hsa-miR-541-3p	002201	hsa-miR-541	UGGUGGGCACAGAAUCUGGACU
hsa-miR-542-3p	001284	hsa-miR-542-3p	UGUGACAGAUUGAUAACUGAAA
hsa-miR-542-5p	002240	hsa-miR-542-5p	UCGGGGAUCAUCAUGUCACGAGA
hsa-miR-544a	002265	hsa-miR-544	AUUCUGCAUUUUUAGCAAGUUC
hsa-miR-545-3p	002267	hsa-miR-545	UCAGCAAACAUUUAUUGUGUGC
hsa-miR-548a-3p	001538	hsa-miR-548a	CAAAACUGGCAAUUACUUUUGC
hsa-miR-548a-5p	002412	hsa-miR-548a-5p	AAAAGUAAUUGCGAGUUUUACC
hsa-miR-548b-3p	001541	hsa-miR-548b	CAAGAACCUCAGUUGCUUUUGU
hsa-miR-548b-3p	002408	hsa-miR-548b-5p	AAAAGUAAUUGUGGUUUUGGCC
hsa-miR-548c-3p	001590	hsa-miR-548c	CAAAAAUCUCAAUUACUUUUGC
hsa-miR-548am-5p; hsa-miR-548c-5p; hsa-miR-548o-5p	002429	hsa-miR-548c-5p	AAAAGUAAUUGCGGUUUUUGCC
hsa-miR-548d-3p	001605	hsa-miR-548d	CAAAAACCACAGUUUCUUUUGC
hsa-miR-548d-5p	002237	hsa-miR-548d-5p	AAAAGUAAUUGUGGUUUUUGCC
hsa-miR-551b-3p	001535	hsa-miR-551b	GCGACCCAUACUUGGUUUCAG
hsa-miR-556-3p	002345	hsa-miR-556-3p	AUAUUACCAUUAGCUCAUCUUU

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hsa-miR-556-5p	002344	hsa-miR-556-5p	GAUGAGCUCAUUGUAAUAUGAG
hsa-miR-561-3p	001528	hsa-miR-561	CAAAGUUUAAGAUCCUUGAAGU
hsa-miR-570-3p	002347	hsa-miR-570	CGAAAACAGCAAUUACCUUUGC
hsa-miR-574-3p	002349	hsa-miR-574-3p	CACGCUCAUGCACACACCCACA
hsa-miR-576-3p	002349	hsa-miR-576-3p	AAGAUGUGGAAAAAUUGGAAUC
hsa-miR-576-5p	002350	hsa-miR-576-5p	AUUCUAAUUUCUCCACGUCUUU
hsa-miR-579	002398	hsa-miR-579	UUCAUUUGGUAUAAACCGCGAUU
hsa-miR-582-3p	002399	hsa-miR-582-3p	UAACUGGUUGAACAACUGAACC
hsa-miR-582-5p	001983	hsa-miR-582-5p	UUACAGUUGUUCAACCAGUUACU
hsa-miR-589-5p	002409	hsa-miR-589	UGAGAACCACGUCUGCUCUGAG
hsa-miR-590-5p	001984	hsa-miR-590-5p	GAGCUUAUUCAUAAAAGUGCAG
hsa-miR-597	001551	hsa-miR-597	UGUGUCACUCGAUGACCACUGU
hsa-miR-598	001988	hsa-miR-598	UACGUCAUCGUUGUCAUCGUCA
hsa-miR-615-3p	001960	mmu-miR-615	UCCGAGCCUGGGUCUCCCUCUU
hsa-miR-615-5p	002353	hsa-miR-615-5p	GGGGGUCCCCGGUGCUCGGAUC
hsa-miR-616-3p	002414	hsa-miR-616	AGUCAUUGGAGGGUUUGAGCAG
hsa-miR-618	001593	hsa-miR-618	AAACUCUACUUGUCCUUCUGAGU
hsa-miR-624-3p	002430	hsa-miR-624	CACAAGGUAUUGGUAUUACCU
hsa-miR-625-5p	002431	hsa-miR-625	AGGGGGAAAGUUCUAUAGUCC
hsa-miR-627	001560	hsa-miR-627	GUGAGUCUCUAAGAAAAGAGGA
hsa-miR-628-5p	002433	hsa-miR-628-5p	AUGCUGACAUAUUUACUAGAGG
hsa-miR-629-5p	002436	hsa-miR-629	UGGGUUUACGUUGGGAGAACU
hsa-miR-636	002088	hsa-miR-636	UGUGCUUGCUCGUCCCGCCCGCA
hsa-miR-642a-5p	001592	hsa-miR-642	GUCCCUCUCCAAAUGUGUCUUG
hsa-miR-651	001604	hsa-miR-651	UUUAGGAUAAGCUUGACUUUUG
hsa-miR-652-3p	002352	hsa-miR-652	AAUGGCGCCACUAGGGUUGUG
hsa-miR-653	002292	hsa-miR-653	GUGUUGAAACAAUCUCUACUG
hsa-miR-654-3p	002239	hsa-miR-654-3p	UAUGUCUGCUGACCAUCACCUU
hsa-miR-654-5p	001611	hsa-miR-654-5p	UGGUGGGCCGCAGAACAUGUGC
hsa-miR-655	001612	hsa-miR-655	AUAAUACAUGGUUAACCUCUUU
hsa-miR-660-5p	001515	hsa-miR-660	UACCCAUUGCAUAUCGGAGUUG
hsa-miR-671-3p	002322	hsa-miR-671-3p	UCCGGUUCUCAGGGCUCCACC
hsa-miR-672 (v10)	002327	hsa-miR-672	UGAGGUUGGUGUACUGUGUGUGA
hsa-miR-674 (v10)	002021	hsa-miR-674	GCACUGAGAUGGGAGUGGUGUA
hsa-miR-708-5p	002341	hsa-miR-708	AAGGAGCUUACAAUCUAGCUGGG
hsa-miR-744-5p	002324	hsa-miR-744	UGCGGGGCUAGGGCUAACAGCA
hsa-miR-758	001990	hsa-miR-758	UUUGUGACCUGGUCCACUAACC
hsa-miR-871 (v10)	002354	hsa-miR-871	UAUUCAGAUUAGUGCCAGUCAUG

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hsa-miR-872 (v10)	002264	hsa-miR-872	AAGGUUACUUGUUAGUUCAGG
hsa-miR-873-5p	002356	hsa-miR-873	GCAGGAACUUGUGAGUCUCCU
hsa-miR-874	002268	hsa-miR-874	CUGCCCUGGCCCGAGGGACCGA
hsa-miR-875-3p	002204	hsa-miR-875-3p	CCUGGAAACACUGAGGUUGUG
hsa-miR-876-3p	002225	hsa-miR-876-3p	UGGUGGUUUACAAAGUAAUUCA
hsa-miR-876-5p	002205	hsa-miR-876-5p	UGGAUUUCUUUGUGAAUCACCA
hsa-miR-885-3p	002372	hsa-miR-885-3p	AGGCAGCGGGGUGUAGUGGAUA
hsa-miR-885-5p	002296	hsa-miR-885-5p	UCCAUUACACUACCCUGCCUCU
hsa-miR-886-3p (v15)	002194	hsa-miR-886-3p	CGCGGGUGCUUACUGACCCUU
hsa-miR-886-5p (v15)	002193	hsa-miR-886-5p	CGGGUCGGAGUUAGCUCAAGCGG
hsa-miR-887	002374	hsa-miR-887	GUGAACGGGCGCCAUCCCGAGG
hsa-miR-888-5p	002212	hsa-miR-888	UACUCAAAAAGCUGUCAGUCA
hsa-miR-889	002202	hsa-miR-889	UUAAUAUCGGACAACCAUUGU
hsa-miR-890	002209	hsa-miR-890	UACUUGGAAAGGCAUCAGUUG
hsa-miR-891a	002191	hsa-miR-891a	UGCAACGAACCUGAGCCACUGA
hsa-miR-891b	002210	hsa-miR-891b	UGCAACUUACCUGAGUCAUUGA
hsa-miR-892a	002195	hsa-miR-892a	CACUGUGUCCUUUCUGCGUAG
hsa-miR-147a	000469	hsa-miR-147	GUGUGUGGAAAUGCUUCUGC
hsa-miR-208a	000511	hsa-miR-208	AUAAGACGAGCAAAAAGCUUGU
hsa-miR-211-5p	000514	hsa-miR-211	UUCCCUUUGUCAUCCUUCGCCU
hsa-miR-212-3p	000515	hsa-miR-212	UAACAGUCUCCAGUCACGGCC
hsa-miR-219-1-3p	002095	hsa-miR-219-1-3p	AGAGUUGAGUCUGGACGUCCCG
hsa-miR-219-2-3p	002390	hsa-miR-219-2-3p	AGAAUUGUGGCUGGACAUCUGU
hsa-miR-220a (v15)	000523	hsa-miR-220	CCACACCGUAUCUGACACUUU
hsa-miR-220b (v15)	002206	hsa-miR-220b	CCACCACCGUGUCUGACACUU
hsa-miR-220c (v15)	002211	hsa-miR-220c	ACACAGGGCUGUUGUGAAGACU
hsa-miR-298	002190	hsa-miR-298	AGCAGAAGCAGGGAGGUUCUCCCA
hsa-miR-325	000540	hsa-miR-325	CCUAGUAGGUGUCCAGUAAGUGU
hsa-miR-346	000553	hsa-miR-346	UGUCUGCCCGCAUGCCUGCCUCU
hsa-miR-376c	002122	hsa-miR-376c	AACAUAGAGGAAAUUCCACGU
hsa-miR-384	000574	hsa-miR-384	AUUCCUAGAAAUUGUUCAUA
hsa-miR-412	001023	hsa-miR-412	ACUUCACCUGGUCCACUAGCCGU
hsa-miR-448	001029	hsa-miR-448	UUGCAUAUGUAGGAUGUCCCAU
hsa-miR-492	001039	hsa-miR-492	AGGACCUGCGGGACAAGAUUCUU
hsa-miR-506-3p	001050	hsa-miR-506	UAAGGCACCCUUCUGAGUAGA
hsa-miR-509-3-5p	002155	hsa-miR-509-3-5p	UACUGCAGACGUGGCAAUCAUG
hsa-miR-511	001111	hsa-miR-511	GUGUCUUUUGCUCUGCAGUCA
hsa-miR-517b (v17)	001152	hsa-miR-517b	UCGUGCAUCCCUUUAGAGUGUU

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-519c-3p	001163	hsa-miR-519c-3p	AAAGUGCAUCUUUUUAGAGGAU
hsa-miR-520b	001116	hsa-miR-520b	AAAGUGCUUCCUUUUAGAGGG
hsa-miR-520e	001119	hsa-miR-520e	AAAGUGCUUCCUUUUUGAGGG
hsa-miR-520f	001120	hsa-miR-520f	AAGUGCUUCCUUUUAGAGGGUU

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miRNA molecules detected by Human Panel B Beads

The following table contains a comprehensive list of the specific miRNA molecules detected by the anti-miRNA probes bound to Human Panel B Beads. Human Panel A and Human Panel B contain non-overlapping miRNA primer sets.

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-7-5p	000268	dme-miR-7	UGGAAGACUAGUGAUUUUGUUGU
hsa-miR-548i	002909	hsa-miR-548i	AAAAGUAAUUGCGGAUUUUGCC
hsa-miR-30a-3p	000416	hsa-miR-30a-3p	CUUUCAGUCGGAUGUUUGCAGC
hsa-miR-30a-5p	000417	hsa-miR-30a-5p	UGUAAACAUCCUCGACUGGAAG
hsa-miR-30d-5p	000420	hsa-miR-30d	UGUAAACAUCCCCGACUGGAAG
hsa-miR-30e-3p	000422	hsa-miR-30e-3p	CUUUCAGUCGGAUGUUUACAGC
hsa-miR-34b-5p	000427	hsa-miR-34b	UAGGCAGUGUCAUUAGCUGAUUG
hsa-miR-126-5p	000451	hsa-miR-126#	CAUUAUUACUUUUGGUACGCG
hsa-miR-154-3p	000478	hsa-miR-154#	AAUCAUACACGGUUGACCUAUU
hsa-miR-182-3p	000483	hsa-miR-213	UGGUUCUAGACUUGCCAACUA
hsa-miR-181a-3p	000516	hsa-miR-181a#	ACCAUCGACCGUUGAUUGUACC
hsa-miR-302c-5p	000534	hsa-miR-302c#	UUUAACAUGGGGGUACCUGCUG
hsa-miR-302d-3p	000535	hsa-miR-302d	UAAGUGCUUCCAUGUUUGAGUGU
hsa-miR-378a-5p	000567	hsa-miR-378	CUCCUGACUCCAGGUCCUGUGU
hsa-miR-380-5p	000570	hsa-miR-380-5p	UGGUUGACCAUAGAACAUGCGC
hsa-miR-1257	002910	hsa-miR-1257	AGUGAAUGAUGGGUUCUGACC
hsa-miR-200a-5p	001011	hsa-miR-200a#	CAUCUUACCGGACAGUGCUGGA
hsa-miR-432-5p	001026	hsa-miR-432	UCUUGGAGUAGGUCAUUGGGUGG
hsa-miR-432-3p	001027	hsa-miR-432#	CUGGAUGGCUCCUCCAUGUCU
hsa-miR-497-5p	001043	hsa-miR-497	CAGCAGCACACUGUGGUUUGU
hsa-miR-500a-3p	001046	hsa-miR-500	AUGCACCUGGGCAAGGAUUCUG
hsa-miR-1238	002927	hsa-miR-1238	CUUCCUCGUCUGUCUGCCCC
hsa-miR-488-5p	001106	hsa-miR-488	CCCAGAUAAUGGCACUCUCAA
hsa-miR-517-5p	001113	hsa-miR-517#	CCUCUAGAUGGAAGCACUGUCU
hsa-miR-516a-3p; hsa-miR-516b-3p	001149	hsa-miR-516-3p	UGCUUCCUUUCAGAGGGU
hsa-miR-518c-5p	001158	hsa-miR-518c#	UCUCUGGAGGGAAGCACUUUCUG
hsa-miR-519e-5p	001166	hsa-miR-519e#	UUCUCCAAAAGGGAGCACUUUC
hsa-miR-520h	001170	hsa-miR-520h	ACAAAGUGCUUCCCUUUAGAGU
hsa-miR-524-3p	001173	hsa-miR-524	GAAGGCGCUUCCCUUUGGAGU
hsa-let-7d-3p	001178	mmu-let-7d#	CUAUACGACCUGCUGCCUUUCU
hsa-miR-363-5p	001283	hsa-miR-363#	CGGGUGGAUCACGAUGCAAUUU
hsa-miR-7-1-3p	001338	rno-miR-7#	CAACAAAUCACAGUCUGCCAUA
hsa-miR-656	001510	hsa-miR-656	AAUAUUAUACAGUCAACCUCU

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-549	001511	hsa-miR-549	UGACAACUAUGGAUGAGCUCU
hsa-miR-657	001512	hsa-miR-657	GGCAGGUUCUCACCCUCUCUAGG
hsa-miR-658	001513	hsa-miR-658	GGCGGAGGGAAGUAGGUCCGUUGGU
hsa-miR-659-3p	001514	hsa-miR-659	CUUGGUUCAGGGAGGGUCCCCA
hsa-miR-551a	001519	hsa-miR-551a	GCGACCCACUCUUGGUUUCCA
hsa-miR-552	001520	hsa-miR-552	AACAGGUGACUGGUUAGACAA
hsa-miR-553	001521	hsa-miR-553	AAAACGGUGAGAUUUUGUUUU
hsa-miR-554	001522	hsa-miR-554	GCUAGUCCUGACUCAGCCAGU
hsa-miR-555	001523	hsa-miR-555	AGGGUAAGCUGAACCUCUGAU
hsa-miR-557	001525	hsa-miR-557	GUUUGCACGGGUGGGCCUUGUCU
hsa-miR-558	001526	hsa-miR-558	UGAGCUGCUGUACCAAAAU
hsa-miR-559	001527	hsa-miR-559	UAAAGUAAAUAUGCACCAAAA
hsa-miR-562	001529	hsa-miR-562	AAAGUAGCUGUACCAUUUGC
hsa-miR-563	001530	hsa-miR-563	AGGUUGACAUACGUUUCCC
hsa-miR-564	001531	hsa-miR-564	AGGCACGGUGUCAGCAGGC
hsa-miR-566	001533	hsa-miR-566	GGGCGCCUGUGAUCCCAAC
hsa-miR-567	001534	hsa-miR-567	AGUAUGUUCUUCCAGGACAGAAC
hsa-miR-569	001536	hsa-miR-569	AGUUAAUGAAUCCUGGAAAGU
hsa-miR-586	001539	hsa-miR-586	UAUGCAUUGUAUUUUUAGGUCC
hsa-miR-587	001540	hsa-miR-587	UUUCCAUAGGUGAUGAGUCAC
hsa-miR-588	001542	hsa-miR-588	UUGGCCACAAUGGGUUAGAAC
hsa-miR-589-3p	001543	hsa-miR-589	UCAGAACAAAUGCCGGUUCCCAGA
hsa-miR-550a-3p	001544	hsa-miR-550	UGUCUUACUCCCUCAGGCACAU
hsa-miR-591	001545	hsa-miR-591	AGACCAUGGGUUCUCAUUGU
hsa-miR-592	001546	hsa-miR-592	UUGUGUCAAUAUGCGAUGAUGU
hsa-miR-593-5p	001547	hsa-miR-593	AGGCACCAGCCAGGCAUUGCUCAGC
hsa-miR-596	001550	hsa-miR-596	AAGCCUGCCCGGCUCCUCGGG
hsa-miR-622	001553	hsa-miR-622	ACAGUCUGCUGAGGUUGGAGC
hsa-miR-599	001554	hsa-miR-599	GUUGUGUCAGUUUAUCAAAC
hsa-miR-623	001555	hsa-miR-623	AUCCCUUGCAGGGGCUGUUGGGU
hsa-miR-600	001556	hsa-miR-600	ACUUACAGACAAGAGCCUUGCUC
hsa-miR-624-5p	001557	hsa-miR-624	UAGUACCAGUACCUUGUGUUCA
hsa-miR-601	001558	hsa-miR-601	UGGUCUAGGAUUGUUGGAGGAG
hsa-miR-626	001559	hsa-miR-626	AGCUGUCUGAAAAUGUCUU
hsa-miR-629-3p	001562	hsa-miR-629	GUUCUCCCAACGUAAGCCCAGC
hsa-miR-630	001563	hsa-miR-630	AGUAUUCUGUACCAGGGAAGGU
hsa-miR-631	001564	hsa-miR-631	AGACCUGGCCCAGACCUCAGC
hsa-miR-603	001566	hsa-miR-603	CACACACUGCAAUUACUUUUGC

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-604	001567	hsa-miR-604	AGGCUGCGGAAUUCAGGAC
hsa-miR-605	001568	hsa-miR-605	UAAAUCCCAUGGUGCCUUCUCCU
hsa-miR-606	001569	hsa-miR-606	AAACUACUGAAAAUCAAAGAU
hsa-miR-607	001570	hsa-miR-607	GUUCAAAUCCAGAUCUAUAAC
hsa-miR-608	001571	hsa-miR-608	AGGGGUGGUGUUGGGACAGCUCCGU
hsa-miR-609	001573	hsa-miR-609	AGGGUGUUUCUCUCAUCUCU
hsa-miR-633	001574	hsa-miR-633	CUAAUAGUAUCUACCACAAUAAA
hsa-miR-634	001576	hsa-miR-634	AACCAGCACCCCAACUUUGGAC
hsa-miR-635	001578	hsa-miR-635	ACUUGGGCACUGAAACAAUGUCC
hsa-miR-637	001581	hsa-miR-637	ACUGGGGGCUUUCGGGCUCUGCGU
hsa-miR-638	001582	hsa-miR-638	AGGGAUCGCGGGCGGGUGGCGGCCU
hsa-miR-639	001583	hsa-miR-639	AUCGCUGCGGUUGCGAGCGCUGU
hsa-miR-640	001584	hsa-miR-640	AUGAUCCAGGAACCUGCCUCU
hsa-miR-641	001585	hsa-miR-641	AAAGACAUAGGAUAGAGUCACCUC
hsa-miR-613	001586	hsa-miR-613	AGGAAUGUUCCUUCUUUGCC
hsa-miR-614	001587	hsa-miR-614	GAACGCCUGUUCUUGCCAGGUGG
hsa-miR-616-5p	001589	hsa-miR-616	ACUCAAAACCCUUCAGUGACUU
hsa-miR-617	001591	hsa-miR-617	AGACUUCCCAUUUGAAGGUGGC
hsa-miR-643	001594	hsa-miR-643	ACUUGUAUGCUAGCUCAGGUAG
hsa-miR-644a	001596	hsa-miR-644	AGUGUGGCUUUCUUAGAGC
hsa-miR-645	001597	hsa-miR-645	UCUAGGCUGGUACUGCUGA
hsa-miR-621	001598	hsa-miR-621	GGCUAGCAACAGCGCUUACCU
hsa-miR-646	001599	hsa-miR-646	AAGCAGCUGCCUCUGAGGC
hsa-miR-647	001600	hsa-miR-647	GUGGCUGCACUCACUUCCUUC
hsa-miR-648	001601	hsa-miR-648	AAGUGUGCAGGGCACUGGU
hsa-miR-649	001602	hsa-miR-649	AAACCUGUGUUGUUCAAGAGUC
hsa-miR-650	001603	hsa-miR-650	AGGAGGCAGCGCUCUCAGGAC
hsa-miR-661	001606	hsa-miR-661	UGCCUGGGUCUCUGGCCUGCGCGU
hsa-miR-662	001607	hsa-miR-662	UCCCACGUUGUGGCCCAGCAG
hsa-miR-571	001613	hsa-miR-571	UGAGUUGGCCAUCUGAGUGAG
hsa-miR-572	001614	hsa-miR-572	GUCCGCUCGGCGGUGGCCCA
hsa-miR-573	001615	hsa-miR-573	CUGAAGUGAUGUGUAACUGAUCAG
hsa-miR-575	001617	hsa-miR-575	GAGCCAGUUGGACAGGAGC
hsa-miR-578	001619	hsa-miR-578	CUUCUUGUGCUCUAGGAUUGU
hsa-miR-580	001621	hsa-miR-580	UUGAGAAUGAUGAAUCAUUAGG
hsa-miR-581	001622	hsa-miR-581	UCUUGUGUUCUCUAGAUCAGU
hsa-miR-583	001623	hsa-miR-583	CAAAGAGGAAGGUCCCAUUAC
hsa-miR-584-5p	001624	hsa-miR-584	UUAUGGUUUGCCUGGGACUGAG

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-585	001625	hsa-miR-585	UGGGCGUAUCUGUAUGCUA
hsa-miR-29c-5p	001818	hsa-miR-29c#	UGACCGAUUUCUCCUGGUGUUC
hsa-miR-766-3p	001986	hsa-miR-766	ACUCCAGCCCCACAGCCUCAGC
hsa-miR-595	001987	hsa-miR-595	GAAGUGUGCCGUGGUGUGUCU
hsa-miR-668	001992	hsa-miR-668	UGUCACUCGGCUCGGCCCACUAC
hsa-miR-767-5p	001993	hsa-miR-767-5p	UGCACCAUGGUUGUCUGAGCAUG
hsa-miR-767-3p	001995	hsa-miR-767-3p	UCUGCUCAUACCCCAUGGUUUCU
hsa-miR-454-5p	001996	hsa-miR-454#	ACCCUAUCAAUAUUGUCUCUGC
hsa-miR-769-5p	001998	hsa-miR-769-5p	UGAGACCUCUGGGUUCUGAGCU
hsa-miR-770-5p	002002	hsa-miR-770-5p	UCCAGUACCACGUGUCAGGGCCA
hsa-miR-769-3p	002003	hsa-miR-769-3p	CUGGGAUCUCCGGGGUCUUGGUU
hsa-miR-802	002004	hsa-miR-802	CAGUAACAAAGAUUCAUCCUUGU
hsa-miR-675-5p	002005	hsa-miR-675	UGGUGCGGAGAGGGCCCACAGUG
hsa-miR-505-5p	002087	hsa-miR-505#	GGGAGCCAGGAAGUAUUGAUGU
hsa-miR-218-1-3p	002094	hsa-miR-218-1#	AUGGUUCCGUCAAGCACCAUGG
hsa-miR-221-5p	002096	hsa-miR-221#	ACCUGGCAUACAAUGUAGAUUU
hsa-miR-222-5p	002097	hsa-miR-222#	CUCAGUAGCCAGUGUAGAUCCU
hsa-miR-223-5p	002098	hsa-miR-223#	CGUGUAUUUGACAAGCUGAGUU
hsa-miR-136-3p	002100	hsa-miR-136#	CAUCAUCGUCUCAAAUGAGUCU
hsa-miR-34b-3p	002102	hsa-miR-34b	CAAUCACUAACUCCACUGCCAU
hsa-miR-185-3p	002104	hsa-miR-185#	AGGGGCUGGCUUUCCUCUGGUC
hsa-miR-186-3p	002105	hsa-miR-186#	GCCCAAAGGUGAAUUUUUUGGG
hsa-miR-195-3p	002107	hsa-miR-195#	CCAAUAUUGGCUGUGCUGCUCC
hsa-miR-30c-1-3p	002108	hsa-miR-30c-1#	CUGGGAGAGGGUUGUUUACUCC
hsa-miR-30c-2-3p	002110	hsa-miR-30c-2#	CUGGGAGAAGGCUGUUUACUCU
hsa-miR-32-3p	002111	hsa-miR-32#	CAAUUUAGUGUGUGUGAUAUUU
hsa-miR-31-3p	002113	hsa-miR-31#	UGCUAUGCCAACAUAUUGCCAU
hsa-miR-130b-5p	002114	hsa-miR-130b#	ACUCUUUCCCUGUUGCACUAC
hsa-miR-26a-2-3p	002115	hsa-miR-26a-2#	CCUAUUCUUGAUUACUUGUUUC
hsa-miR-361-3p	002116	hsa-miR-361-3p	UCCCCCAGGUGUGAUUCUGAUUU
hsa-let-7g-3p	002118	hsa-let-7g#	CUGUACAGGCCACUGCCUUGC
hsa-miR-302b-5p	002119	hsa-miR-302b#	ACUUUAACAUGGAAGUGCUUUC
hsa-miR-302d-5p	002120	hsa-miR-302d#	ACUUUAACAUGGAGGCACUUGC
hsa-miR-367-5p	002121	hsa-miR-367#	ACUGUUGCUAAUAUGCAACUCU
hsa-miR-374a-3p	002125	hsa-miR-374a#	CUUAUCAGAUUGUAUUGUAAUU
hsa-miR-23b-5p	002126	hsa-miR-23b#	UGGGUUCCUGGCAUGCUGAUUU
hsa-miR-376a-5p	002127	hsa-miR-324-5p	GUAGAUUCUCCUUCUAUGAGUA
hsa-miR-377-5p	002128	hsa-miR-377#	AGAGGUUGCCCUUGGUGAAUUC

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-30b-3p	002129	hsa-miR-30b#	CUGGGAGGUGGAUGUUUACUUC
hsa-miR-122-3p	002130	hsa-miR-122#	AACGCCAUUAUCACACUAAAUA
hsa-miR-130a-5p	002131	hsa-miR-130a#	UUCACAUUGUGCUACUGUCUGC
hsa-miR-132-5p	002132	hsa-miR-132#	ACCGUGGCUUUCGAUUGUUACU
hsa-miR-148a-5p	002134	hsa-miR-148a#	AAAGUUCUGAGACACUCCGACU
hsa-miR-33a-5p	002135	hsa-miR-33a	GUGCAUUGUAGUUGCAUUGCA
hsa-miR-33a-3p	002136	hsa-miR-33a#	CAAUGUUUCCACAGUGCAUCAC
hsa-miR-92a-1-5p	002137	hsa-miR-92a-1#	AGGUUGGGAUCGGUUGCAAUGCU
hsa-miR-92a-2-5p	002138	hsa-miR-92a-2#	GGGUGGGGAUUUGUUGCAUUAC
hsa-miR-93-3p	002139	hsa-miR-93#	ACUGCUGAGCUAGCACUUCCCG
hsa-miR-96-3p	002140	hsa-miR-96#	AAUCAUGUGCAGUGCCAAUAUG
hsa-miR-99a-3p	002141	hsa-miR-99a#	CAAGCUCGCUUCUAUGGGUCUG
hsa-miR-100-3p	002142	hsa-miR-100#	CAAGCUUGUAUCUAUAGGUAUG
hsa-miR-101-5p	002143	hsa-miR-101#	CAGUUAUCACAGUGCUGAUGCU
hsa-miR-138-2-3p	002144	hsa-miR-138-2#	GCUAUUUCACGACACCAGGGUU
hsa-miR-141-5p	002145	hsa-miR-141#	CAUCUUCCAGUACAGUGUUGGA
hsa-miR-143-5p	002146	hsa-miR-143#	GGUGCAGUGCUGCAUCUCUGGU
hsa-miR-144-5p	002148	hsa-miR-144#	GGAUAUCAUCAUAUACUGUAAG
hsa-miR-145-3p	002149	hsa-miR-145#	GGAUUCCUGGAAAUACUGUUCU
hsa-miR-920	002150	hsa-miR-920	GGGGAGCUGUGGAAGCAGUA
hsa-miR-921	002151	hsa-miR-921	CUAGUGAGGGACAGAACCAGGAUUC
hsa-miR-922	002152	hsa-miR-922	GCAGCAGAGAAUAGGACUACGUC
hsa-miR-924	002154	hsa-miR-924	AGAGUCUUGUGAUGUCUUGC
hsa-miR-337-3p	002157	hsa-miR-337-3p	CUCCUAUAUGAUGCCUUUCUUC
hsa-miR-125b-2-3p	002158	hsa-miR-125b-2#	UCACAAGUCAGGCUCUUGGGAC
hsa-miR-135b-3p	002159	hsa-miR-135b#	AUGUAGGGCUAAAAGCCAUGGG
hsa-miR-148b-5p	002160	hsa-miR-148b#	AAGUUCUGUUAUACACUCAGGC
hsa-miR-146a-3p	002163	hsa-miR-146a#	CCUCUGAAAUUCAGUUCUUCAG
hsa-miR-149-3p	002164	hsa-miR-149#	AGGGAGGGACGGGGGCUGUGC
hsa-miR-29b-1-5p	002165	hsa-miR-29b-1#	GCUGGUUUCAUAUGGUGGUUUAGA
hsa-miR-29b-2-5p	002166	hsa-miR-29b-2#	CUGGUUUCACAUGGUGGCUUAG
hsa-miR-105-3p	002168	hsa-miR-105#	ACGGAUGUUUGAGCAUGUGCUA
hsa-miR-106a-3p	002170	hsa-miR-106a#	CUGCAAUGUAAGCACUUCUUAC
hsa-miR-16-2-3p	002171	hsa-miR-16-2#	CCAAUAUUACUGUGCUGCUUUA
hsa-let-7i-3p	002172	hsa-let-7i#	CUGCGCAAGCUACUGCCUUGCU
hsa-miR-15b-3p	002173	hsa-miR-15b#	CGAAUCAUUAUUUGCUGCUCUA
hsa-miR-27b-5p	002174	hsa-miR-27b#	AGAGCUUAGCUGAUUGGUGAAC
hsa-miR-933	002176	hsa-miR-933	UGUGCGCAGGGAGACCUCUCCC

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-934	002177	hsa-miR-934	UGUCUACUACUGGAGACACUGG
hsa-miR-935	002178	hsa-miR-935	CCAGUUACCGCUUCCGCUACCGC
hsa-miR-936	002179	hsa-miR-936	ACAGUAGAGGGAGGAAUCGCAG
hsa-miR-937	002180	hsa-miR-937	AUCCGCGCUCUGACUCUCUGCC
hsa-miR-938	002181	hsa-miR-938	UGCCCUUAAAGGUGAACCCAGU
hsa-miR-939	002182	hsa-miR-939	UGGGGAGCUGAGGCUCUGGGGGUG
hsa-miR-941	002183	hsa-miR-941	CACCCGGCUGUGUGCACAUGUGC
hsa-miR-335-3p	002185	hsa-miR-335#	UUUUUCAUUAUUGCUCCUGACC
hsa-miR-942	002187	hsa-miR-942	UCUUCUCUGUUUUGGCCAUGUG
hsa-miR-943	002188	hsa-miR-943	CUGACUGUUGCCGUCCUCCAG
hsa-miR-944	002189	hsa-miR-944	AAAUUAUUGUACAUCGGAUGAG
hsa-miR-99b-3p	002196	hsa-miR-99b#	CAAGCUCGUGUCUGUGGGUCCG
hsa-miR-124-5p	002197	hsa-miR-124#	CGUGUUCACAGCGGACCUUGAU
hsa-miR-541-5p	002200	hsa-miR-541#	AAAGGAUUCUGCUGUCGGUCCCACU
hsa-miR-875-5p	002202	hsa-miR-875-5p	UAUACCUCAGUUUUAUCAGGUG
hsa-miR-888-3p	002213	hsa-miR-888#	GACUGACACCUCUUUGGGUGAA
hsa-miR-892b	002214	hsa-miR-892b	CACUGGCUCCUUUCUGGGUAGA
hsa-miR-9-3p	002231	hsa-miR-9#	AUAAAGCUAGAUAACCGAAAGU
hsa-miR-411-3p	002243	hsa-miR-411#	UAUGUAACACGGUCCACUAACC
hsa-miR-378a-3p	002233	hsa-miR-378	ACUGGACUUGGAGUCAGAAGG
hsa-miR-151a-3p	002254	hsa-miR-151a-3p	CUAGACUGAAGCUCCUUGAGG
hsa-miR-340-3p	002259	hsa-miR-340#	UCCGUCUCAGUUACUUUAUAGC
hsa-miR-190b	002263	hsa-miR-190b	UGAUAUGUUUGAUAUUGGGUU
hsa-miR-545-5p	002266	hsa-miR-545#	UCAGUAAAUGUUUAUUAGAUGA
hsa-miR-183-3p	002270	hsa-miR-183#	GUGAAUUACCGAAGGGCCAUAA
hsa-miR-192-3p	002272	hsa-miR-192#	CUGCCAAUUCCAUAGGUCACAG
hsa-miR-200b-5p	002274	hsa-miR-200b#	CAUCUUACUGGGCAGCAUUGGA
hsa-miR-200c-5p	002286	hsa-miR-200c#	CGUCUUACCCAGCAGUGUUUGG
hsa-miR-155-3p	002287	hsa-miR-155#	CUCCUACAUAUUAGCAUUAACA
hsa-miR-10a-3p	002288	hsa-miR-10a#	CAAAUUCGUAUCUAGGGGAAUA
hsa-miR-214-5p	002293	hsa-miR-214#	UGCCUGUCUACACUUGCUGUGC
hsa-miR-218-2-3p	002294	hsa-miR-218-2#	CAUGGUUCUGUCAAGCACCGCG
hsa-miR-129-1-3p	002298	hsa-miR-129#	AAGCCCUUACCCCAAAAAGUAU
hsa-miR-22-5p	002301	hsa-miR-22#	AGUUCUUCAGUGGCAAGCUUUA
hsa-miR-425-3p	002302	hsa-miR-425#	AUCGGGAAUGUCGUGUCCGCCC
hsa-miR-30d-3p	002305	hsa-miR-30d#	CUUUCAGUCAGAUGUUUGCUGC
hsa-let-7a-3p	002307	hsa-let-7a#	CUAUACAAUCUACUGUCUUUC
hsa-miR-424-3p	002309	hsa-miR-424#	CAAAACGUGAGGCGCUGCUAU

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-18b-3p	002310	hsa-miR-18b#	UGCCCUAAAUGCCCCUUCUGGC
hsa-miR-20b-3p	002311	hsa-miR-20b#	ACUGUAGUAUGGGCACUUCCAG
hsa-miR-431-3p	002312	hsa-miR-431#	CAGGUCGUCUUGCAGGGCUUCU
hsa-miR-7-2-3p	002314	hsa-miR-7-2#	CAACAAAUCCCAGUCUACCUAA
hsa-miR-10b-3p	002315	hsa-miR-10b#	ACAGAUUCGAUUCUAGGGGAAU
hsa-miR-34a-3p	002316	hsa-miR-34a#	CAAUCAGCAAGUAUACUGCCCU
hsa-miR-181a-2-3p	002317	hsa-miR-181a-2#	ACCACUGACCGUUGACUGUACC
hsa-miR-744-3p	002325	hsa-miR-744#	CUGUUGCCACUAACCUCAACCU
hsa-miR-452-3p	002330	hsa-miR-452#	CUCAUCUGCAAAGAAGUAAGUG
hsa-miR-409-3p	002332	hsa-miR-409-3p	GAAUGUUGCUCGGUGAACCCCU
hsa-miR-181c-3p	002333	hsa-miR-181c#	AACCAUCGACCGUUGAGUGGAC
hsa-miR-196a-3p	002336	hsa-miR-196a#	CGGCAACAAGAAACUGCCUGAG
hsa-miR-483-3p	002339	hsa-miR-483-3p	UCACUCCUCUCCUCCCGUCUU
hsa-miR-708-3p	002342	hsa-miR-708#	CAACUAGACUGUGAGCUUCUAG
hsa-miR-92b-5p	002343	hsa-miR-92b#	AGGGACGGGACGCGGUGCAGUG
hsa-miR-551b-5p	002346	hsa-miR-551b#	GAAAUCAAGCGUGGGUGAGACC
hsa-miR-202-5p	002362	hsa-miR-202#	UUCCUAUGCAUAUACUUCUUUG
hsa-miR-193b-5p	002366	hsa-miR-193b#	CGGGGUUUUGAGGGCGAGAUGA
hsa-miR-497-3p	002368	hsa-miR-497#	CAAACCACACUGUGGUGUUAGA
hsa-miR-518e-5p; hsa-miR-519a-5p; hsa-miR-519b-5p; hsa-miR-519c-5p; hsa-miR-522-5p; hsa-miR-523-5p	002371	hsa-miR-518e#	CUCUAGAGGGAAGCGCUUUCUG
hsa-miR-543	002376	hsa-miR-543	AAACAUUCGCGGUGCACUUCUU
hsa-miR-125b-1-3p	002378	hsa-miR-125b-1#	ACGGGUUAGGCUCUUGGGAGCU
hsa-miR-194-3p	002379	hsa-miR-194#	CCAGUGGGGCUGCUGUUAUCUG
hsa-miR-106b-3p	002380	hsa-miR-106b#	CCGCACUGUGGGUACUUGCUGC
hsa-miR-302a-5p	002381	hsa-miR-302a#	ACUUAAACGUGGAUGUACUUGCU
hsa-miR-519b-3p	002384	hsa-miR-519b-3p	AAAGUGCAUCCUUUUAGAGGUU
hsa-miR-518f-5p	002387	hsa-miR-518f#	CUCUAGAGGGAAGCACUUUCUC
hsa-miR-374b-3p	002391	hsa-miR-374b#	CUUAGCAGGUUGUAUUAUCAUU
hsa-miR-520c-3p	002400	hsa-miR-520c-3p	AAAGUGCUUCCUUUUAGAGGGU
hsa-let-7b-3p	002404	hsa-let-7b#	CUAUACAACCUACUGCCUUCCC
hsa-let-7c* (v16)	002405	hsa-let-7c#	UAGAGUUACACCCUGGGAGUUA
hsa-let-7e-3p	002407	hsa-let-7e#	CUAUACGGCCUCCUAGCUUUCC
hsa-miR-550a-5p	002410	hsa-miR-550	AGUGCCUGAGGGAGUAAGAGCCC
hsa-miR-593-3p	002411	hsa-miR-593	UGUCUCUGCUGGGGUUUCU
hsa-let-7f-1-3p	002417	hsa-let-7f-1#	CUAUACAAUCUAUUGCCUUCCC
hsa-let-7f-2-3p	002418	hsa-let-7f-2#	CUAUACAGUCUACUGUCUUUCC

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-15a-3p	002419	hsa-miR-15a#	CAGGCCAUAUUGUGCUGCCUCA
hsa-miR-16-1-3p	002420	hsa-miR-16-1#	CCAGUAUUAACUGUGCUGCUGA
hsa-miR-17-3p	002421	hsa-miR-17#	ACUGCAGUGAAGGCACUUGUAG
hsa-miR-18a-3p	002423	hsa-miR-18a#	ACUGCCCUAAGUGCUCCUUCUGG
hsa-miR-19a-5p	002424	hsa-miR-19a#	AGUUUUGCAUAGUUGCACUACA
hsa-miR-19b-1-5p	002425	hsa-miR-19b-1#	AGUUUUGCAGGUUUGCAUCCAGC
hsa-miR-625-3p	002432	hsa-miR-625#	GACUAUAGAACUUUCCCCCUCA
hsa-miR-628-3p	002434	hsa-miR-628-3p	UCUAGUAAGAGUGGCAGUCGA
hsa-miR-20a-3p	002437	hsa-miR-20a#	ACUGCAUUAUGAGCACUUAAAG
hsa-miR-21-3p	002438	hsa-miR-21#	CAACACCAGUCGAUGGGCUGU
hsa-miR-23a-5p	002439	hsa-miR-23a#	GGGGUUCCUGGGGAUGGGAUUU
hsa-miR-24-1-5p	002440	hsa-miR-24-1#	UGCCUACUGAGCUGAUAUCAGU
hsa-miR-24-2-5p	002441	hsa-miR-24-2#	UGCCUACUGAGCUGAAACACAG
hsa-miR-25-5p	002442	hsa-miR-25#	AGGCGGAGACUUGGGCAAUUG
hsa-miR-26a-1-3p	002443	hsa-miR-26a-1#	CCUAUUCUUGGUUACUUGCACG
hsa-miR-26b-3p	002444	hsa-miR-26b#	CCUGUUCUCCAUUACUUGGCUC
hsa-miR-27a-5p	002445	hsa-miR-27a#	AGGGCUUAGCUGCUUGUGAGCA
hsa-miR-29a-5p	002447	hsa-miR-29a#	ACUGAUUUCUUUUGGUGUUCAG
hsa-miR-151a-5p	002642	hsa-miR-151-5P	UCGAGGAGCUCACAGUCUAGU
hsa-miR-765	002643	hsa-miR-765	UGGAGGAGAAGGAAGGUGAUG
hsa-miR-338-5p	002658	hsa-miR-338-5P	AACAAUAUCCUGGUGCUGAGUG
hsa-miR-620	002672	hsa-miR-620	AUGGAGAUAGAUAUAGAAAU
hsa-miR-577	002675	hsa-miR-577	UAGAUAAAAUAUUGGUACCUG
hsa-miR-144-3p	002676	hsa-miR-144	UACAGUAUAGAUGAUGUACU
hsa-miR-590-3p	002677	hsa-miR-590-3P	UAAUUUUAUGUAUAAGCUAGU
hsa-miR-191-3p	002678	hsa-miR-191#	GCUGCGCUUGGAUUUCGUCCCC
hsa-miR-665	002681	hsa-miR-665	ACCAGGAGGCUGAGGCCCCU
hsa-miR-520d-3p	002743	hsa-miR-520D-3P	AAAGUGCUUCUCUUUGGUGGGU
hsa-miR-1224-3p	002752	hsa-miR-1224-3P	CCCCACCUCCUCUCUCCUCAG
hsa-miR-1305	002867	hsa-miR-1305	UUUUCAACUCUAAUGGGAGAGA
hsa-miR-513c-5p	002756	hsa-miR-513C	UUCUCAAGGAGGUGUCGUUUAU
hsa-miR-513b	002757	hsa-miR-513B	UUCACAAGGAGGUGUCAUUUAU
hsa-miR-1226-5p	002758	hsa-miR-1226#	GUGAGGGCAUGCAGGCCUGGAUGGGG
hsa-miR-1236	002761	hsa-miR-1236	CCUCUUCCCCUUGUCUCUCCAG
hsa-miR-1228-5p	002763	hsa-miR-1228#	GUGGGCGGGGGCAGGUGUGUG
hsa-miR-1225-3p	002766	hsa-miR-1225-3P	UGAGCCCCUGUGCCGCCCCCAG
hsa-miR-1233	002768	hsa-miR-1233	UGAGCCCUGUCCUCCCGCAG
hsa-miR-1227	002769	hsa-miR-1227	CGUGCCACCCUUUUCCCCAG

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-1286	002773	hsa-miR-1286	UGCAGGACCAAGAUGAGCCCU
hsa-miR-548m	002775	hsa-miR-548M	CAAAGGUAUUUGUGGUUUUUG
hsa-miR-1179	002776	hsa-miR-1179	AAGCAUUCUUUCAUUGGUUGG
hsa-miR-1178	002777	hsa-miR-1178	UUGCUCACUGUUCUUCCCUAG
hsa-miR-1205	002778	hsa-miR-1205	UCUGCAGGGUUUGCUUUGAG
hsa-miR-1271-5p	002779	hsa-miR-1271	CUUGGCACCUAGCAAGCACUCA
hsa-miR-1201 (v15)	002781	hsa-miR-1201	AGCCUGAUUAAACACAUGCUCUGA
hsa-miR-548j	002783	hsa-miR-548J	AAAAGUAAUUGCGGUCUUUGGU
hsa-miR-1263	002784	hsa-miR-1263	AUGGUACCCUGGCAUACUGAGU
hsa-miR-1294	002785	hsa-miR-1294	UGUGAGGUUGGCAUUGUUGUCU
hsa-miR-1269a	002789	hsa-miR-1269	CUGGACUGAGCCGUGCUACUGG
hsa-miR-1265	002790	hsa-miR-1265	CAGGAUGUGGUCAAGUGUUGUU
hsa-miR-1244	002791	hsa-miR-1244	AAGUAGUUGGUUUGUAUGAGAUGGUU
hsa-miR-1303	002792	hsa-miR-1303	UUUAGAGACGGGGUCUUGCUCU
hsa-miR-1259 (v15)	002796	hsa-miR-1259	AUAUAUGAUGACUUAGCUUUU
hsa-miR-548p	002798	hsa-miR-548P	UAGCAAAAACUGCAGUUACUUU
hsa-miR-1244	002799	hsa-miR-1244	CAAGUCUUAUUUGAGCACCUGUU
hsa-miR-1255b-5p	002801	hsa-miR-1255B	CGGAUGAGCAAAGAAAGUGGUU
hsa-miR-1282	002803	hsa-miR-1282	UCGUUUGCCUUUUUCUGCUU
hsa-miR-1255a	002805	hsa-miR-1255A	AGGAUGAGCAAAGAAAGUAGAUU
hsa-miR-1270	002807	hsa-miR-1270	CUGGAGAUAUGGAAGAGCUGUGU
hsa-miR-1197	002810	hsa-miR-1197	UAGGACACAUGGUCUACUUCU
hsa-miR-1324	002815	hsa-miR-1324	CCAGACAGAAUUCUAUGCACUUUC
hsa-miR-548h-5p	002816	hsa-miR-548H	AAAAGUAAUCGCGGUUUUUGUC
hsa-miR-1254	002818	hsa-miR-1254	AGCCUGGAAGCUGGAGCCUGCAGU
hsa-miR-548k	002819	hsa-miR-548K	AAAAGUACUUGCGGAUUUUGCU
hsa-miR-1251	002820	hsa-miR-1251	ACUCUAGCUGCCAAAGGCGCU
hsa-miR-1285-3p	002822	hsa-miR-1285	UCUGGGCAACAAAGUGAGACCU
hsa-miR-1245a	002823	hsa-miR-1245	AAGUGAUCUAAAGGCCUACAU
hsa-miR-1292	002824	hsa-miR-1292	UGGGAACGGGUUCCGGCAGACGCUG
hsa-miR-1301	002827	hsa-miR-1301	UUGCAGCUGCCUGGGAGUGACUUC
hsa-miR-1200	002829	hsa-miR-1200	CUCCUGAGCCAUUCUGAGCCUC
hsa-miR-1182	002830	hsa-miR-1182	GAGGGUCUUGGGAGGGAUGUGAC
hsa-miR-1288	002832	hsa-miR-1288	UGGACUGCCCUGAUCUGGAGA
hsa-miR-1291	002838	hsa-miR-1291	UGGCCCUGACUGAAGACCAGCAGU
hsa-miR-1275	002840	hsa-miR-1275	GUGGGGGAGAGGCUGUC
hsa-miR-1183	002841	hsa-miR-1183	CACUGUAGGUGAUGGUGAGAGUGGGCA
hsa-miR-1184	002842	hsa-miR-1184	CCUGCAGCGACUUGAUGGCUUCC

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-1276	002843	hsa-miR-1276	UAAAGAGCCCUGUGGAGACA
hsa-miR-320b	002844	hsa-miR-320B	AAAAGCUGGGUUGAGAGGGCAA
hsa-miR-1272	002845	hsa-miR-1272	GAUGAUGAUGGCAGCAAAUUCUGAAA
hshsa-miR-1180	002847	hshsa-miR-1180	UUUCCGGCUCGCGUGGGUGUGU
hsa-miR-1256	002850	hsa-miR-1256	AGGCAUUGACUUCUCACUAGCU
hsa-miR-1278	002851	hsa-miR-1278	UAGUACUGUGCAUAUCAUCUAU
hsa-miR-1262	002852	hsa-miR-1262	AUGGGUGAAUUUGUAGAAGGAU
hsa-miR-1243	002854	hsa-miR-1243	AACUGGAUCAAUUAUAGGAGUG
hsa-miR-663b	002857	hsa-miR-663B	GGUGGCCCGGCCGUGCCUGAGG
hsa-miR-1252	002860	hsa-miR-1252	AGAAGGAAAUUGAAUUCAUUUA
hsa-miR-1298	002861	hsa-miR-1298	UUCAUUCGGCUGUCCAGAUGUA
hsa-miR-1290	002863	hsa-miR-1290	UGGAUUUUUGGAUCAGGGA
hsa-miR-1249	002868	hsa-miR-1249	ACGCCCUUCCCCCCCUUCUUCA
hsa-miR-1248	002870	hsa-miR-1248	ACCUUCUUGUAUAAGCACUGUGCUAAA
hsa-miR-1289	002871	hsa-miR-1289	UGGAGUCCAGGAAUCUGCAUUUU
hsa-miR-1204	002872	hsa-miR-1204	UCGUGGCCUGGUCUCCAUUAU
hsa-miR-1826 (v15)	002873	hsa-miR-1826	AUUGAUCAUCGACACUUCGAACGCAAU
hsa-miR-1304-5p	002874	hsa-miR-1304	UUUGAGGCUACAGUGAGAUGUG
hsa-miR-1203	002877	hsa-miR-1203	CCCGGAGCCAGGAUGCAGCUC
hsa-miR-1206	002878	hsa-miR-1206	UGUUCAUGUAGAUGUUUAAGC
hsa-miR-548g-3p	002879	hsa-miR-548G	AAAACUGUAAUUACUUUUGUAC
hsa-miR-1208	002880	hsa-miR-1208	UCACUGUUCAGACAGGCGGA
hsa-miR-548e	002881	hsa-miR-548E	AAAAACUGAGACUACUUUUGCA
hsa-miR-1274a (v16)	002883	hsa-miR-1274A	GUCCCUGUUCAGGCGCCA
hsa-miR-1274b (v16)	002884	hsa-miR-1274B	UCCCUGUUCGGGCGCCA
hsa-miR-1267	002885	hsa-miR-1267	CCUGUUGAAGUGUAAUCCCCA
hsa-miR-1250	002887	hsa-miR-1250	ACGGUGCUGGAUGUGGCCUUU
hsa-miR-548n	002888	hsa-miR-548N	CAAAAGUAAUUGUGGAUUUUGU
hsa-miR-1283	002890	hsa-miR-1283	UCUACAAAGGAAAGCGCUUUCU
hsa-miR-1247-5p	002893	hsa-miR-1247	ACCCGUCCCGUUCGUCCCCGGA
hsa-miR-1253	002894	hsa-miR-1253	AGAGAAGAAGAUCAGCCUGCA
hsa-miR-720	002895	hsa-miR-720	UCUCGCUGGGGCCUCCA
hsa-miR-1260a	002896	hsa-miR-1260	AUCCCACCUCUGCCACCA
hsa-miR-664-3p	002897	hsa-miR-664	UAUUCAUUUAUCCCCAGCCUACA
hsa-miR-1302	002901	hsa-miR-1302	UUGGGACAUACUUAUGCUAAA
hsa-miR-1300 (v13)	002902	hsa-miR-1300	UUGAGAAGGAGGCUGCUG
hsa-miR-1284	002903	hsa-miR-1284	UCUAUACAGACCCUGGCUUUUC
hsa-miR-548l	002904	hsa-miR-548L	AAAAGUAUUUGCGGGUUUUGUC

miRBase ID_v18	LT† Assay ID	LT† Assay Name	Target Sequence
hsa-miR-1293	002905	hsa-miR-1293	UGGGUGGUCUGGAGAUUUGUGC
hsa-miR-1825	002907	hsa-miR-1825	UCCAGUGCCCUCCUCUCC
hsa-miR-1296	002908	hsa-miR-1296	UUAGGGCCCUGGCUCCAUCUCC
hsa-miR-206	000510	hsa-miR-206	UGGAAUGUAAGGAAGUGUGUGG

† Life Technologies

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Safety

WARNING! GENERAL SAFETY. Using this product in a manner not specified in the user documentation may result in personal injury. Ensure that anyone using this product has received instructions in general safety practices for laboratories and the safety information provided in this document.

- Before handling chemicals, read and understand all applicable Safety Data Sheets (SDSs) and use appropriate personal protective equipment (gloves, gowns, eye protection, etc). To obtain SDSs, see the "Documentation and Support" section in this document.

Chemical safety

WARNING! GENERAL CHEMICAL HANDLING. To minimize hazards, ensure laboratory personnel read and practice the general safety guidelines for chemical usage, storage, and waste provided below, and consult the relevant SDS for specific precautions and instructions:

- Read and understand the Safety Data Sheets (SDSs) provided by the chemical manufacturer before you store, handle, or work with any chemicals or hazardous materials. To obtain SDSs, see the "Documentation and Support" section in this document.
- Minimize contact with chemicals. Wear appropriate personal protective equipment when handling chemicals (for example, safety glasses, gloves, or protective clothing).
- Check regularly for chemical leaks or spills. If a leak or spill occurs, follow the manufacturer's cleanup procedures as recommended in the SDS.
- Handle chemical wastes in a fume hood.
- Ensure use of primary and secondary waste containers. (A primary waste container holds the immediate waste. A secondary container contains spills or leaks from the primary container. Both containers must be compatible with the waste material and meet federal, state, and local requirements for container storage.)
- After emptying a waste container, seal it with the cap provided.
- Characterize (by analysis if necessary) the waste generated by the particular applications, reagents, and substrates used in your laboratory.
- Ensure that the waste is stored, transferred, transported, and disposed of according to all local, state/provincial, and/or national regulations.
- **IMPORTANT!** Biohazardous materials may require special handling, and disposal limitations may apply.

CAS	Chemical	Phrase
50-01-1	Guanidine HCl	Contact with acids or bleach liberates toxic gases. DO NOT ADD acids or bleach to any liquid wastes containing this product.
75-21-8	Ethylene Oxide	Highly flammable and carcinogenic.

Biological hazard safety

WARNING! BIOHAZARD. Biological samples such as tissues, body fluids, infectious agents, and blood of humans and other animals have the potential to transmit infectious diseases. Follow all applicable local, state/provincial, and/or national regulations. Wear appropriate protective equipment, which includes but is not limited to: protective eyewear, face shield, clothing/lab coat, and gloves. All work should be conducted in properly equipped facilities using the appropriate safety equipment (for example, physical containment devices). Individuals should be trained according to applicable regulatory and company/institution requirements before working with potentially infectious materials. Read and follow the applicable guidelines and/or regulatory requirements in the following:

In the U.S.:

- U.S. Department of Health and Human Services guidelines published in Biosafety in Microbiological and Biomedical Laboratories found at: **www.cdc.gov/biosafety**
- Occupational Safety and Health Standards, Bloodborne Pathogens (29 CFR§1910.1030), found at: **www.access.gpo.gov/nara/cfr/waisidx_01/29cfr1910a_01.html**
- Your company's/institution's Biosafety Program protocols for working with/handling potentially infectious materials.
- Additional information about biohazard guidelines is available at: **www.cdc.gov**

In the EU:

Check local guidelines and legislation on biohazard and biosafety precaution and refer to the best practices published in the World Health Organization (WHO) Laboratory Biosafety Manual, third edition, found at: **www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/**

Documentation and Support

Related documentation

The following related documents are also provided:

Document	Pub. no.	Description
TaqMan® miRNA ABC Purification Kit Product Insert	4473427	Briefly describes the TaqMan® miRNA ABC Purification Kit components and storage information.
TaqMan® miRNA ABC Purification Kit Quick Reference Card	4473438	Provides brief, step-by-step procedures for using the TaqMan® miRNA ABC Purification Kit.

Note: For additional documentation, see "Obtaining support" on page 59.

Obtaining SDSs

Safety Data Sheets (SDSs) are available from **www.lifetechnologies.com/support**

Note: For the SDSs of chemicals not distributed by Life Technologies, contact the chemical manufacturer.

Obtaining Certificates of Analysis

The Certificate of Analysis provides detailed quality control and product qualification information for each product. Certificates of Analysis are available on our website. Go to **www.lifetechnologies.com/support** and search for the Certificate of Analysis by product lot number, which is printed on the box.

Obtaining support

For the latest services and support information for all locations, go to:

www.lifetechnologies.com/support

At the website, you can:

- Access worldwide telephone and fax numbers to contact Technical Support and Sales facilities
- Search through frequently asked questions (FAQs)
- Submit a question directly to Technical Support
- Search for user documents, SDSs, vector maps and sequences, application notes, formulations, handbooks, certificates of analysis, citations, and other product support documents
- Obtain information about customer training
- Download software updates and patches

Limited Product Warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at **www.lifetechnologies.com/termsandconditions**. If you have any questions, please contact Life Technologies Corporation at **www.lifetechnologies.com/support**.

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