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ScriptMiner™ Small RNA-Seq Library Preparation Kit

Cat. No. SMMP101212 – 12 Reactions

Important! *The ScriptMiner Small RNA-Seq Library Preparation Kit and the ScriptMiner Index PCR Primers will be discontinued on December 31, 2013 or when current inventory is sold.*

Please consider the Illumina® TruSeq™ Small RNA Sample Preparation Kit as an alternative.

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Quick Protocol for ScriptMiner™ Small RNA-Seq Library Preparation Kit

For experienced users only!

Step	Procedure	Pages
Ligation of 3′-Adaptor Oligo	1. Incubate 8 µl RNA sample with 1 µl 3′-Adaptor Oligo 2 min @ 65°C, then place on ice. 2. Add in order, on ice: 0.75 µl ScriptMiner 3′-RNA Ligation Buffer 0.75 µl DTT 0.5 µl RiboGuard RNase Inhibitor 3.0 µl PEG Solution 1.0 µl ScriptMiner 3′-RNA Ligase. 3. Thoroughly mix and incubate for 2 h @ RT. 4. Add 1 µl ScriptMiner Finishing Enzyme. 5. Incubate for 30 min @ 30°C. 6. Add 4 µl Ligation STOP Solution; mix thoroughly. 7. (Optional) To include small 5′-capped and 5′-triphosphorylated RNAs, add 1 µl TAP and incubate 30 min @ 37°C.	7
Removal of excess 3′-Adaptor Oligo	1. Add in order, on ice: 2 µl Degradase Buffer 7 µl $MgCl_2$ 1 µl Degradase Enzyme 2. Add 10 µl 3′-Adaptor Degradation Master Mix. 3. Incubate 30 min @ 37°C.	9
Ligation of 5′-Adaptor Oligo	1. Combine in order: 1 µl ScriptMiner 5′-RNA Ligation Buffer 4 µl PEG Solution 1 µl ATP 2 µl ScriptMiner 5′-Adaptor Oligo 1 µl ScriptMiner 5′-RNA Ligase 2. Thoroughly mix and incubate at least 1 h @ RT. 3. Add 10 µl Nuclease-Free Water. 4. Purify di-tagged RNA using Zymo column. Elute with 30 µl Nuclease-Free Water.	9

Step	Procedure	Pages
cDNA synthesis	1. Add in order: 4 µl MMLV Reverse Transcriptase Buffer 2 µl dNTP PreMix 2 µl DTT 1 µl ScriptMiner cDNA Synthesis Primer 1 µl MMLV Reverse Transcriptase 2. Mix and incubate 15 min @ 37°C. 3. Heat 15 min @ 85°C, then cool to 4°C or place on ice.	10
PCR amplification	If adding optional barcodes, see p. 13. If not adding barcodes, combine: 40-45 µl Di-tagged cDNA from Part E, Step 4 50 µl FailSafe PCR PreMix E 0-5 µl Nuclease-Free Water 2 µl ScriptMiner Forward PCR Primer 2 µl ScriptMiner Reverse PCR Primer (Index 1) 1 µl FailSafe PCR Enzyme Mix (2.5 Units/µl) Perform PCR: 30 s @ 95°C, then 12 cycles of: 15 s @ 94°C; 5 s @ 55°C; 10 s @ 65°C.	11
Library purification and size-selection	Qiagen or Zymo column, followed by PAGE.	12

1. Kit Contents

Component Name	Tube Label	Volume	Cap Color
ScriptMiner 3′-RNA Ligation Buffer	3′ Ligation Buffer	12 µl	Green
PEG Solution	PEG	120 µl	
DTT	DTT	50 µl	
RiboGuard RNase Inhibitor	RiboGuard™ RNase Inhibitor	10 µl	
ScriptMiner MultiPlex 3′-Adaptor Oligo	3′ Adaptor Oligo MultiPlex	15 µl	
ScriptMiner 3′-RNA Ligase	3′ RNA Ligase	15 µl	
ScriptMiner Finishing Enzyme	Finishing Enzyme	15 µl	
Tobacco Acid Pyrophosphatase	TAP	15 µl	
Ligation STOP Solution	Ligation STOP Solution	60 µl	
ScriptMiner Degradase Buffer	Degradase Buffer	30 µl	Clear
$MgCl_2$	$MgCl_2$	120 µl	
ScriptMiner Degradase Enzyme	Degradase Enzyme	15 µl	
ScriptMiner Control RNA Oligo (1 µM)	Control RNA Oligo (1 µM)	6 µl	
Nuclease-Free Water	Nuclease-Free Water	2 x 1 ml	
ScriptMiner 5′-RNA Ligation Buffer	5′ Ligation Buffer	15 µl	Blue
ScriptMiner MultiPlex 5′-Adaptor Oligo	5′ Adaptor Oligo MultiPlex	30 µl	
ATP	ATP	15 µl	
ScriptMiner 5′-RNA Ligase	5′ RNA Ligase	15 µl	
MMLV Reverse Transcription Buffer	MMLV RT Buffer	60 µl	Red
ScriptMiner MultiPlex cDNA Primer	cDNA Primer MultiPlex	15 µl	
dNTP PreMix	dNTP PreMix	30 µl	
MMLV Reverse Transcriptase	MMLV Reverse Transcriptase	15 µl	
FailSafe PCR PreMix E	FailSafe™ PCR PreMix E	1.2 ml	Yellow
ScriptMiner MultiPlex Forward PCR Primer	Forward PCR Primer	48 µl	
ScriptMiner MultiPlex Reverse PCR Primer	Reverse PCR Primer (Index 1)	48 µl	

Storage: Store the kit at –20°C in a freezer without a defrost cycle.

Additional Required Reagents and Equipment:

RNA purification columns, such as RNA Clean & Concentrator™-5 Kit (Zymo Research)

MinElute™ PCR Purification columns (Qiagen)

FailSafe™ Enzyme Mix (Epicentre)

Performance Specifications and Quality Control

The ScriptMiner Small RNA-Seq Library Preparation Kit is function-tested in a control reaction using 100 fmol of 22-nucleotide (nt) Control RNA Oligo. The 135-bp PCR product (di-tagged cDNA) must be present, after 15 cycles of PCR, when 15%-20% by volume of the PCR samples are resolved on 8% native PAGE in 1X TBE buffer.

2. Overview of the Process

1. **Ligation of the 3′-Adaptor Oligo.** A 3′-tagging sequence (the 3′-Adaptor Oligo) is ligated to the 3′ end of the RNA. Small RNA with 3′ ends containing either a 2′,3′-OH or 2′-O-Me,3′-OH are efficiently tagged in the reaction.
2. **Modification of the 5′ end of the RNA (optional).** If desired, small 5′-capped and 5′-triphosphorylated RNAs can be converted to 5′-monophosphorylated RNA, using Tobacco Acid Pyrophosphatase provided in the kit, for subsequent ligation of the 5′-Adaptor Oligo and inclusion in the sequencing library.
3. **Removal of excess 3′-Adaptor Oligo.** Excess 3′-Adaptor Oligo, which can cause high background in the sequencing reaction, is significantly reduced using a proprietary Degradase Enzyme.
4. **Ligation of the 5′-Adaptor Oligo.** A 5′-tagging sequence (the 5′-Adaptor Oligo) is ligated to the 5′ end of 5′-monophosphorylated RNA.
5. **cDNA synthesis.** The purified, di-tagged RNA is reverse-transcribed into cDNA using the cDNA Synthesis Primer and MMLV Reverse Transcriptase.
6. **PCR amplification:** The di-tagged cDNA is amplified by limited-cycle PCR using the Forward and Reverse PCR Primers provided in the kit and a proofreading thermostable DNA polymerase (provided by the user).
7. **Library purification:** Excess nucleotides and PCR primers are removed from the library by a method provided by the user.

3. RNA Sample Considerations

Input RNA:

The RNA purification method should be designed such that it includes small RNA (18-40 nt). Any of the following can be used as input RNA in the standard kit reaction:

- *Good:* From 1 to 5 µg of total RNA, isolated by a method that includes small RNA (18-40 nt).
- *Better:* From 1 to 5 µg of size-fractionated small RNA of <200 nt prepared using commercially available column methods (provided by the user).
- *Best:* At least 100 pg of polyacrylamide gel–selected small RNA of about 18-40 nt, e.g., isolated with the flashPAGE™ Fractionator (Ambion).

The RNA sample should be dissolved in 8 µl of Nuclease-Free Water.

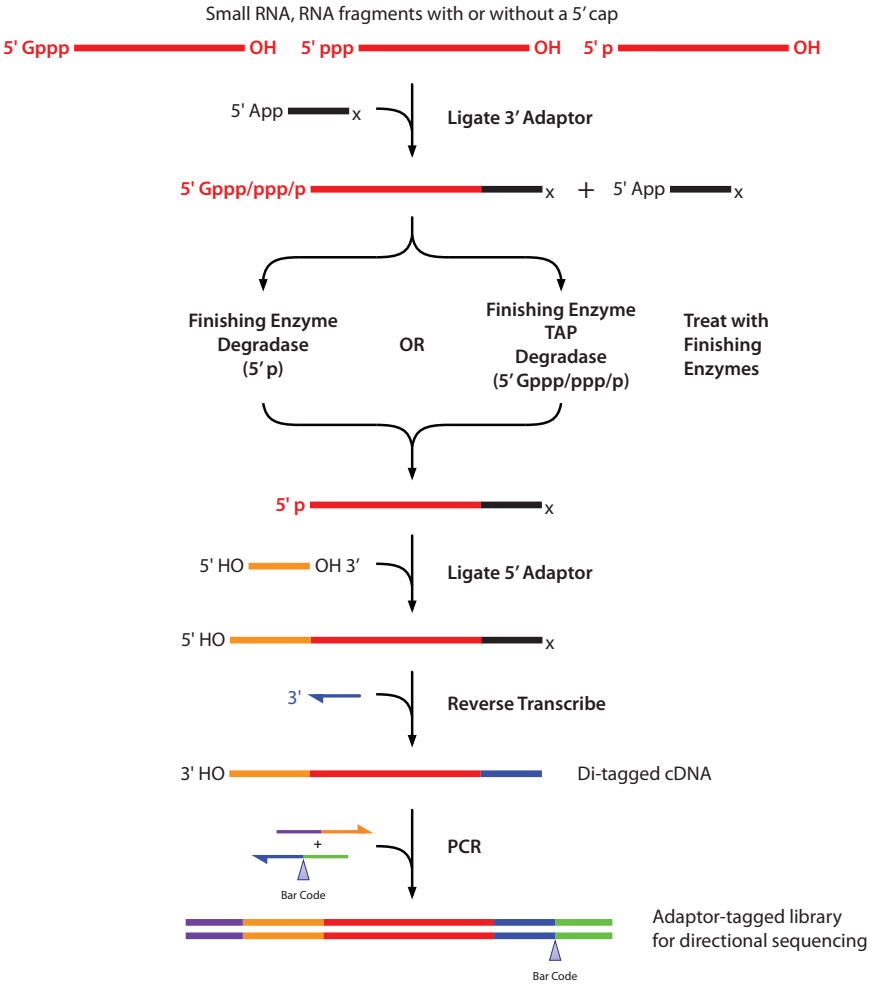

Figure 1. An overview of the procedure for the ScriptMiner™ Small RNA-Seq Library Preparation Kit.

Types of Small RNAs Included in the ScriptMiner Library:

RNA 3′-end modifications: The standard kit reaction produces a library from RNAs with 3′ ends containing either a 2′,3′-OH group (such as mammalian miRNA) or a 2′-O-Me,3′-OH group (such as piwi-interacting RNA [piRNA] and plant miRNA).

RNA 5′-end modifications: The standard kit reaction produces a library from RNAs with a 5′-monophosphorylated end (5′ pNNNN…), such as miRNA. However, an optional treatment of the RNA with Tobacco Acid Pyrophosphatase (TAP; provided in the kit) enables library preparation from 5′-monophosphorylated RNA, small 5′-capped (5′ GpppNNNN…), and small 5′-triphosphorylated (5′ pppNNNN…) RNAs.

Size of the Adaptor-Tagged Library:

The process for the ScriptMiner Small RNA-Seq Library Preparation Kit adds 113 nt to the RNA. Forty-nine nucleotides are added to the 5′ end of the RNA and 64 nt are added to the 3′ end of the RNA.

Sequencing the ScriptMiner Small RNA-Seq Library:

A ScriptMiner Small RNA-Seq library cannot be sequenced on an Illumina MiSeq™ sequencer. See Appendix 1 for details and other important Information.

4. Kit Procedure

Note: *To help ensure success, we recommend using the 22-Control RNA Oligo and a "no RNA" control when first becoming familiar with the ScriptMiner Kit procedure. To run a control reaction, see Appendix 3.*

4.A. Ligation of the 3′-Adaptor Oligo

Remove the ScriptMiner Kit from storage at –20°C. Warm the PEG Solution to room temperature. The room-temperature PEG Solution will be used in both Part 4.A, Step 1 and Part 4.C, Step 1. Place the remaining kit components on ice.

Required in Part 4.A

Component Name	Tube Label	Cap Color
ScriptMiner 3′-RNA Ligation Buffer	3′ Ligation Buffer	Green
PEG Solution	PEG Solution	
DTT	DTT	
RiboGuard RNase Inhibitor	RiboGuard™ RNase Inhibitor	
ScriptMiner 3′-Adaptor Oligo	3′ Adaptor Oligo	
ScriptMiner 3′-RNA Ligase	3′ RNA Ligase	
ScriptMiner Finishing Enzyme	Finishing Enzyme	
Tobacco Acid Pyrophosphatase (optional)	TAP	
Ligation STOP Solution	Ligation STOP Solution	
Nuclease-Free Water	Nuclease-Free Water	Clear

Important! *Be sure to use the ScriptMiner 3′-RNA Ligation Buffer and ScriptMiner 3′-RNA Ligase in the green-cap tubes in this step.*

1. Mix 8 µl of the RNA sample with 1 µl of the 3′-Adaptor Oligo. Incubate at 65°C for 2 minutes, then place on ice.
2. Prepare a 3′-Adaptor Ligation Master Mix. For each sample, combine in order on ice:

0.75 µl	ScriptMiner 3′-RNA Ligation Buffer
0.75 µl	DTT
0.5 µl	RiboGuard RNase Inhibitor
3.0 µl	PEG Solution
1.0 µl	ScriptMiner 3′-RNA Ligase.
6.0 µl	Total volume

3. Add 6 µl of the 3′-Ligation Master Mix to each small-RNA sample. Thoroughly mix each viscous reaction by pipetting several times to ensure it is homogeneous.
4. Incubate the reactions at room temperature (~25°C) for 2 hours.

   Note: *Steps 5 and 6 will prepare a sequencing library only from RNAs with a 5′ monophosphate (5′ pNNNN…). If you want to prepare a sequencing library from RNAs with a 5′ monophosphate (5′ pNNNN…), a 5′ cap (5′ GpppNNNN…), and a 5′ triphosphate (5′ pppNNNN…), perform Steps 5-7.*
5. After the 2-hour ligation reaction in Step 4, add 1 µl of the ScriptMiner Finishing Enzyme to each reaction. Incubate the reactions at 30°C for 30 minutes. During the incubation, prepare the 3′-Adaptor Degradation Master Mix as described in Part 4.B, Step 1.
6. Add 4 µl of Ligation STOP Solution to each reaction. Mix thoroughly and briefly centrifuge each reaction to collect the contents at the bottom of the tube.
   a) Proceed to Step 7 If you want to include 5′-capped and 5′-triphosphorylated RNAs in the library.
   b) If you do not want to include 5′-capped and 5′-triphosphorylated RNAs in the library, then add 1 µl of Nuclease-Free water to each reaction and proceed to Part 4.B.

Optional Step:

7. Add 1 µl of TAP to each reaction. Mix thoroughly by pipetting several times. Incubate the reactions at 37°C for 30 minutes. During the incubation, prepare the 3′-Adaptor Degradation Master Mix as described in Part 4.B, Step 1. Proceed to Part 4.B.

4.B. Removal of Excess 3′-Adaptor Oligo

Required in Part 4.B

Component Name	Tube Label	Cap Color
Degradase Buffer	Degradase Buffer	Clear
$MgCl_2$	$MgCl_2$	
Degradase Enzyme	Degradase Enzyme	

1. Prepare the 3′-Adaptor Degradation Master Mix. For each reaction, combine in order on ice:

   2 µl Degradase Buffer
   7 µl $MgCl_2$
   1 µl Degradase Enzyme
   10 µl Total volume

2. Add 10 µl of the 3′-Adaptor Degradation Master Mix to each reaction.
3. Incubate each reaction at 37°C for 30 minutes. During the 30-minute incubation, prepare the 5′-Adaptor Ligation Master Mix (Part 4.C, Step 1).

4.C. Ligation of the 5′-Adaptor Oligo

Required in Part 4.C

Component Name	Tube Label	Cap Color
ScriptMiner 5′-RNA Ligation Buffer	5′ Ligation Buffer	Blue
ATP	ATP	
ScriptMiner 5′-RNA Ligase	5′ RNA Ligase	
ScriptMiner 5′-Adaptor Oligo	5′ Adaptor Oligo	
PEG Solution	PEG Solution	Green
Nuclease-Free Water	Nuclease-Free Water	Clear

Important! *Be sure to use the ScriptMiner 5′-RNA Ligation Buffer and ScriptMiner 5′-RNA Ligase in the blue-cap tubes in this step.*

1. Prepare the 5′-Adaptor Ligation Master Mix. For each reaction, combine in order:

   1 µl ScriptMiner 5′-RNA Ligation Buffer
   4 µl PEG Solution
   1 µl ATP
   2 µl ScriptMiner 5′-Adaptor Oligo
   1 µl ScriptMiner 5′-RNA Ligase
   9 µl Total volume

   Thoroughly mix the viscous solution by pipetting several times.

2. Add 9 µl of the 5′-Adaptor Ligation Master Mix to each reaction from Part 4.B, Step 3. Thoroughly mix the viscous solution by pipetting several times. Incubate each reaction at room temperature for at least 1 hour. Incubation for an additional 1-2 hours may improve the yield of the library.
3. Add 10 µl of Nuclease-Free Water to each reaction from Step 2. The volume of each reaction is now 50 µl.
4. Purify the di-tagged RNA using the Zymo RNA Clean & Concentrator-5 Kit. Follow the Zymo protocol for total RNA (>17 nt), except elute each sample *two* times using 15 µl of Nuclease-Free Water for each elution. Measure the recovered volume as accurately as possible (e.g., using a pipettor). Then, add Nuclease-Free Water to a final volume of 30 µl.

   Proceed to Part 4.D, or store the purified di-tagged RNA at –70°C.

4.D. cDNA Synthesis

Required in Part 4.D

Component Name	Tube Label	Cap Color
MMLV Reverse Transcriptase Buffer	MMLV RT Buffer	Red
dNTP PreMix	dNTP PreMix	
ScriptMiner cDNA Synthesis Primer	cDNA Primer	
MMLV Reverse Transcriptase	MMLV Reverse Transcriptase	
DTT	DTT	Green

1. Prepare the Reverse Transcription Master Mix. For each reaction, combine in order:

4 µl	MMLV Reverse Transcriptase Buffer
2 µl	dNTP PreMix
2 µl	DTT
1 µl	ScriptMiner cDNA Synthesis Primer
1 µl	MMLV Reverse Transcriptase
10 µl	Total volume

2. To each 30-µl sample of purified di-tagged RNA from Part 4.D, add 10 µl of the Reverse Transcription Master Mix. Mix the reactions by pipetting several times.
3. Incubate the reactions at 37°C for 15 minutes.
4. Terminate the reactions by heating the tubes at 85°C for 15 minutes. Then cool to 4°C or place on ice.

   The di-tagged cDNA can now be amplified by PCR (Part 4.E) or stored at –20°C.

4.E. PCR Amplification

PCR amplification: i) completes the addition of Illumina® adaptor sequences; ii) amplifies the library; and iii) adds an Index or user-defined barcode to the library. At least two PCR cycles must be performed in order to generate a viable sequencing library.

The standard ScriptMiner reaction using the Reverse PCR Primer that is included in the kit produces a library containing Illumina Index 1. To add:

- An Illumina Index other than Index 1, replace the Reverse PCR Primer that is included in this kit with one of the ScriptMiner™ Index PCR Primers (1-12), available separately from Epicentre (see Part 6). Only Epicentre's ScriptMiner Index PCR Primers are compatible with the ScriptMiner procedure.
- A user-defined barcode, see Appendix 2.

Alternative PCR enzyme. This kit is optimized for use with Epicentre's proof-reading FailSafe PCR Enzyme Mix. However, alternative proofreading PCR enzymes can be used. If using an alternative PCR enzyme:

- Use the reaction buffer that is provided with the alternative PCR enzyme. *Do not* use the FailSafe™ PreMix E that is provided in this kit.
- If the alternative PCR enzyme's buffer does not contain dNTPs, then add dNTPs to a final concentration of 0.2 mM each dNTP.

Required in Part 4.E

Component Name	Tube Label	Cap Color
ScriptMiner Forward PCR Primer	Forward PCR Primer	Yellow
ScriptMiner Reverse PCR Primer (Index 1)	Reverse PCR Primer (Index 1)	
FailSafe PCR PreMix E	FailSafe PCR PreMix E	
Nuclease-Free Water	Nuclease-Free Water	Clear

Provided by the user: Proofreading PCR enzyme, such as Epicentre's FailSafe PCR Enzyme Mix (see Part 6).

1. Prepare the PCR Master Mix. For each di-tagged cDNA made in Part 4.E, Step 5, prepare a 100-µl reaction mix by combining:

40-45 µl	Di-tagged cDNA from Part 4.E, Step 4
50 µl	FailSafe PCR PreMix E
0-5 µl	Nuclease-Free Water
2 µl	ScriptMiner Forward PCR Primer
2 µl	ScriptMiner Reverse PCR Primer (Index 1) or other ScriptMiner Index PCR Primer
1 µl	FailSafe PCR Enzyme Mix (2.5 Units/µl)
100 µl	Total volume

2. Perform PCR using the following conditions:

   95°C for 30 seconds to denature the di-tagged cDNA

   Then, 12 cycles of:

   94°C for 15 seconds

   55°C for 5 seconds

   65°C for 10 seconds

4.F. Library Purification and Size-Selection

1. Purify the PCR amplification products using a commercially available column-based method, such as the MinElute PCR Purification Kit (Qiagen) or the DNA Clean & Concentrator Kit-5 (Zymo Research). Elute the purified DNA with 10 µl of Nuclease-Free Water (Zymo column) or Elution Buffer (Qiagen column).
2. Size-select the ScriptMiner library using an 8% polyacrylamide gel (8% PAGE).

Note: *The process for the ScriptMiner Small RNA-Seq Library Preparation Kit adds 113 nt to the RNA. Therefore, the cDNA derived from miRNA or other small RNAs (~18-40 nt) will be ~131-153 bp in length. To ensure compatibility with subsequent cluster amplification and sequencing quality, at least 20 µl of library material at ~10 nM should be recovered following gel purification. This is equivalent to ~0.2 pmol total yield or ~10 ng (at 0.5 ng/µl) of a 135-bp PCR product produced from the Control RNA Oligo included in the kit (see Appendix 3).*

5. Appendices

Appendix 1: Sequencing the ScriptMiner Library

Note: *Some nucleotide sequences shown in Appendix 1 are copyrighted to Illumina, Inc. Oligonucleotide sequences © 2006-2012 Illumina, Inc. All rights reserved.*

MiSeq compatibility: ScriptMiner libraries are not compatible with sequencing on an Illumina MiSeq sequencer. ScriptMiner libraries are single-read libraries designed for single-read flow cells. MiSeq flow cells are designed for paired-end sequencing. The single-read ScriptMiner libraries do not attach efficiently to a paired-end flow cell.

Illumina TruSeq™ Cluster Kit compatibility: ScriptMiner Small RNA-Seq libraries are compatible with TruSeq™ Cluster Kits v2 or higher on the cBot, or v5 or higher on the Cluster Station.

Single-read sequencing: ScriptMiner libraries can be sequenced using the Illumina Small RNA Sequencing Primer or TruSeq Primers (e.g., HP6 or HP10). The sequence produced by these primers corresponds to the sense strand of the original RNA molecule. The first nucleotide read corresponds to the 5′ end of the original RNA molecule.

Index Read sequencing: Index reads can be sequenced using the Illumina Multiplexing Index Read Sequencing Primer or TruSeq Primers (e.g., HP8). The first nucleotide read by these primers is the first nucleotide of the Index.

Blue	=	Sequence added by the 3′-Adaptor Oligo and PCR amplification
Red	=	Sequence added by the 5′-Adaptor Oligo and PCR amplification
Black	=	Sequence of the cDNA
Read 1 Primer	=	Illumina Small-RNA Sequencing Primer or HP6 or HP10
Index Primer	=	Illumina Multiplexing Index Read Sequencing Primer or HP8

Figure 3. Sequencing the ScriptMiner™ library.

Appendix 2: Adding a User-Defined Barcode to the Library

Note: *Some nucleotide sequences shown in Appendix 2 are copyrighted to Illumina, Inc. Oligonucleotide sequences © 2006-2012 Illumina, Inc. All rights reserved.*

A barcode is added by the Reverse PCR Primer in Part 4.F of the procedure. A Reverse PCR Primer containing a user-defined barcode sequence must be synthesized by the user and is then used as the Reverse PCR Primer in Part 4.F of the procedure.

The user-defined Reverse PCR Primer(s) must be the following sequence:

5′ CAAGCAGAAGACGGCATACGAGAT **desired barcode's reverse complement** GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT 3′

The primer(s) should be dissolved to a concentration of 20 µM in Nuclease-Free Water.

Important! *The user-defined barcode sequence of the custom-synthesized Reverse PCR Primer should be the reverse complement of the sequence read. For example, using the Illumina Multiplexing Index Read Sequencing Primer, the user-defined barcode sequence:*

5′…ACGTAC… 3′ will be read as: 5′…GTACGT…3′

Please contact Epicentre's Technical Support if you have questions about adding user-defined barcodes or synthesizing custom reverse PCR primers.

Appendix 3: Control Reactions

Control RNA Oligo (included in the kit): 5′ p–NNCGCUUGCAGAGAGAAAUCNN–OH 3′

To ensure success, we recommend using the RNA Control Oligo when first becoming familiar with the ScriptMiner Kit procedure. This positive control sample consists of a 22-nt, 5′-phosphorylated RNA oligo containing two degenerate nucleotides on both the 5′ and 3′ ends, and will produce a 135-bp PCR product. It is designed to mimic the typical length of a miRNA and provide a robust signal using the ScriptMiner procedure. The RNA Control Oligo is provided as a 1 µM solution.

Dilute the Control RNA 1:10 with Nuclease-Free Water. If desired, a No-RNA control reaction can also be run. If doing a No-RNA control reaction, substitute 1 µl of Nuclease-Free Water for the Control RNA Oligo.

Control Reaction:

1 µl	Control RNA Oligo RNA (0.1 pmol)
7 µl	Nuclease-Free Water
8 µl	Total volume

Proceed to Part 4.A, Step 1 of the procedure.

6. Related Products

Ribo-Zero™ Magnetic Kit (Human/Mouse/Rat)	
MRZH116	6 Reactions
MRZH11124	24 Reactions
Ribo-Zero™ rRNA Removal Kit (Human/Mouse/Rat) Low Input	
RZH1086	6 Reactions
Ribo-Zero™ Magnetic Gold Kit (Human/Mouse/Rat)	
MRZG126	6 Reactions
Ribo-Zero™ Magnetic Kit (Bacteria)	
MRZMB126	6 Reactions
MRZG12324	24 Reactions
Ribo-Zero™ Magnetic Kit (Plant Leaf)	
MRZPL116	6 Reactions
MRZMB12424	24 Reactions
Ribo-Zero™ Magnetic Kit (Plant Seed/Root)	
MRZSR116	6 Reactions
ScriptSeq™ v2 RNA-Seq Library Preparation Kit	
SSV21106	6 Reactions
SSV21124	24 Reactions
ScriptMiner™ Index PCR Primers (1-12)	
SMIP2124	24 Reactions each
FailSafe™ Enzyme Mix Only	
FSE51100	100 Units
FSE5101K	1,000 Units
Tobacco Acid Pyrophosphatase (TAP)	
T81050	50 Units at 5 U/µl
T19050	50 Units at 10 U/µl
T19100	100 Units at 10 U/µl
T19250	250 Units at 10 U/µl
T19500	500 Units at 10 U/µl

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