

## SMART-Seq® Total RNA Mid Input

| Catalog Nos.                         | Amount  | Lot Number                  |
|--------------------------------------|---------|-----------------------------|
| 635049                               | 24 rxns | Specified on product label. |
| 635050 (Also sold as part of 635048) | 96 rxns | Specified on product label. |

### Description

SMART-Seq Total RNA Mid Input can be used to generate total RNA sequencing (RNA-seq) libraries compatible with Illumina® platforms, starting from as little as 100 pg of poly(A)-purified or ribosomal RNA-depleted RNA. The kit utilizes SMART® (Switching Mechanism At 5' end of RNA Template) technology coupled with PCR amplification to generate Illumina-compatible libraries without the need for enzymatic cleanup or adapter ligations. The directionality of the template-switching reaction preserves the strand orientation of the RNA, making it possible to obtain strand-specific sequencing data from the synthesized cDNA. Up to 384 indexed libraries can be prepared using Unique Dual Index Kits (Cat. Nos. 634752–634756, sold separately).

The kit is also designed to work with 10–100 ng of full-length or sheared total RNA from human, mouse, or rat treated by RiboGone™ - Mammalian (Cat. Nos. 634846 & 634847, sold separately) which removes ribosomal RNA (rRNA) (5S, 5.8S, 18S, and 28S) and some mitochondrial rRNA (12S) sequences.

### Package Contents

#### Package 1:

| <u>635049</u><br>(24 rxns) | <u>635050</u><br>(96 rxns) |  |
|----------------------------|----------------------------|--|
| 5 µl                       | 5 µl                       | Control Mouse Liver Total RNA (1 µg/µl)    |
| 48 µl                      | 192 µl                     | SMARTer® Stranded Oligonucleotide (12 µM)* |

#### Package 2:

| <u>635049</u><br>(24 rxns) | <u>635050</u><br>(96 rxns) |  |
|----------------------------|----------------------------|--|
| 24 µl                      | 96 µl                      | SMART Stranded N6 Primer (12 µM)*                    |
| 96 µl                      | 384 µl                     | First-Strand Buffer (RNase-Free) (5X)                |
| 48 µl                      | 192 µl                     | dNTP Mix (dATP, dCTP, dGTP, and dTTP, each at 10 mM) |
| 24 µl                      | 96 µl                      | Dithiothreitol (DTT; 100 mM)                         |
| 48 µl                      | 192 µl                     | SMARTScribe™ Reverse Transcriptase (100 U/µl)        |
| 1 ml                       | 3 x 1 ml                   | Nuclease-Free Water                                  |
| 55 µl                      | 55 µl                      | RNase Inhibitor (40 U/µl)                            |
| 1 ml                       | 4 ml                       | Stranded Elution Buffer                              |
| 50 µl                      | 100 µl                     | SeqAmp™ DNA Polymerase                               |
| 1.25 ml                    | 2.5 ml                     | SeqAmp PCR Buffer (2X)                               |

\*Takara Bio USA, Inc. proprietary sequences.

#### Takara Bio USA, Inc.

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U.S. Technical Support: [technical\\_support@takarabio.com](mailto:technical_support@takarabio.com)

|  |                                 |                              |                             |
|--|---------------------------------|------------------------------|-----------------------------|
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|--|---------------------------------|------------------------------|-----------------------------|

# Certificate of Analysis

SMART-Seq Total RNA Mid Input

Cat. Nos. 635049 & 635050

Also sold as part of 635048

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## Storage Conditions

- Store Package 1 at  $-70^{\circ}\text{C}$ .
- Store Stranded Elution Buffer at  $-20^{\circ}\text{C}$ . Once thawed, the buffer can be stored at room temperature.
- Store all other reagents at  $-20^{\circ}\text{C}$ .

## Expiration Date

- Specified on product label.

## Shipping Conditions

- Dry ice

## Product Documents

Documents for our products are available for download at [takarabio.com/manuals](http://takarabio.com/manuals)

The following documents apply to this product:

- SMART-Seq Total RNA Mid Input User Manual
- Unique Dual Index Kits Protocol-At-A-Glance

## Quality Control Data

A sample kit from each lot was tested as follows: 1 ng of Control Mouse Liver Total RNA was subjected to first-strand cDNA synthesis as described in the user manual. The cDNA was purified using NucleoMag NGS Clean-up and Size Select (Takara Bio, Cat. No. 744970). The purified first-strand cDNA was then used as template in PCR for 16 cycles. PCR products were purified with NucleoMag NGS Clean-up and Size Select beads and resuspended in 20  $\mu\text{l}$  of Stranded Elution Buffer. The PCR product was diluted 1:4, and 1  $\mu\text{l}$  of the diluted PCR reaction was analyzed with an Agilent BioAnalyzer and a High Sensitivity DNA Kit (Agilent Technologies, Cat. No. 5067-4626). A peak was manually integrated from 150–1,000 bp. To obtain the total library output, the concentration defined by BioAnalyzer software was multiplied by 4, yielding an output concentration of at least 7.5 nM.

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

## SMART-Seq® Total RNA Mid Input

### CATALOG NOS.

635049 & 635050

### NOTICE TO PURCHASER:

Our products are to be used for **Research Use Only**. They may not be used for any other purpose, including, but not limited to, use in humans, therapeutic or diagnostic use, or commercial use of any kind. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without our prior written approval.

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### STATEMENT 392

This product is protected by U.S. Patent Nos. 10,941,397 and 10,954,510 and European Patent No. 1485394804 and Japanese Patent No. 2016-524004 and corresponding U.S. pending patents and other foreign patents pending. For further license information, please contact a Takara Bio USA licensing representative by email at [licensing@takarabio.com](mailto:licensing@takarabio.com).

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