

SMARTer® Universal Low Input RNA Kit Components

Catalog No.	Amount	Lot Number
634939 (Not sold separately)	10 rxns	Specified on product label.
634941 (Not sold separately)	25 rxns	

Description

The SMARTer Universal Low Input RNA Kit for Sequencing contains the components needed to synthesize high-quality cDNA from as little as 200 pg of input RNA. The kit utilizes both SMART® technology and random priming, and has been designed and validated to prepare cDNA samples for sequencing and quantification with next-generation sequencing platforms. While SMART technology offers unparalleled sensitivity and unbiased amplification of cDNA transcripts, random (universal) priming allows for amplification of damaged RNA and maintains the true representation of the original mRNA transcripts. Both of these factors are critical for transcriptome sequencing and gene expression analysis.

Package Contents

Box 1:

- | <u>634939</u> | <u>634941</u> | |
|---------------|---------------|--------------------------------------|
| • 10 µl | 25 µl | SMARTer II A Oligonucleotide (24 µM) |
| • 10 µl | 25 µl | Control Sheared Total RNA (50 ng/µl) |

Box 2:

- | <u>634939</u> | <u>634941</u> | |
|---------------|---------------|--|
| • 10 µl | 25 µl | 3' SMART N6 CDS Primer II A (24 µM) |
| • 20 µl | 50 µl | PCR Primer IIA (12 µM) |
| • 40 µl | 100 µl | 5X First-Strand Buffer (RNase-Free) |
| • 10 µl | 25 µl | SMARTer dNTP Mix (dATP, dCTP, dGTP, and dTTP, each at 20 mM) |
| • 10 µl | 25 µl | Dithiothreitol (DTT; 100 mM) |
| • 20 µl | 50 µl | BSA (0.1%) |
| • 20 µl | 50 µl | SMARTScribe™ Reverse Transcriptase (100 U/µl) |
| • 1 ml | 2 x 1 ml | Nuclease-Free Water |
| • 55 µl | 140 µl | RNase Inhibitor (40 U/µl) |
| • 1 ml | 2 x 1 ml | Purification Buffer (10 mM Tris-Cl, pH 8.5) |
| • 10 µl | 25 µl | RsaI (10 U/µl) |
| • 20 µl | 50 µl | RsaI Buffer (10X) |

Storage Conditions

- Store Control Sheared Total RNA and SMARTer IIA Oligonucleotide at -70°C.
- Store Purification Buffer at -20°C. (Once thawed, the buffer can be stored at room temperature.)
- Store all other reagents at -20°C.

Takara Bio USA, Inc.

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Certificate of Analysis

Cat. Nos. 634939 & 634941

SMARTer Universal Low Input RNA Kit Components

Shelf Life

- 1 year from date of receipt under proper storage conditions.

Shipping Conditions

- Box 1 & Box 2: Dry ice (-70°C)

Product Documents

Documents for our products are available for download at takarabio.com/manuals

The following documents apply to this product:

- SMARTer Universal Low Input RNA Kit for Sequencing User Manual

Quality Control Data

A sample kit from each lot was tested as follows: 200 pg of Control Sheared Total RNA were subjected to first-strand cDNA synthesis as described in the SMARTer Universal Low Input RNA Kit for Sequencing User Manual. The cDNA was purified using an Agencourt AMPure XP Kit. The purified first-strand cDNA was then used as template in PCR for 15 cycles. PCR products were purified with AMPure XP beads and resuspended in 12 μl of Purification Buffer. 10 μl were digested with RsaI, purified with AMPure XP beads, and resuspended in 12 μl of Purification Buffer. 1 μl of the digested PCR reaction was analyzed with an Agilent BioAnalyzer and a High Sensitivity DNA Kit (Agilent Cat. No. 5067-4626). A peak was manually integrated from 75–1,000 bp. To get the total cDNA output, the concentration defined by BioAnalyzer software was multiplied by 12 μl ; outputs ranged from 2–10 ng.

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

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CATALOG NOS.

634939 & 634941

NOTICE TO PURCHASER:

Our products are to be used for research purposes only. They may not be used for any other purpose, including, but not limited to, use in drugs, in vitro diagnostic purposes, therapeutics, or in humans. 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 prior written approval of Takara Bio USA, Inc.

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