

SMART-Seq® v4 Ultra® Low Input RNA Kit for Sequencing Components

Catalog Nos.	Amount	Lot Number
634895 (Not sold separately; sold as a part of 634888)	12 rxns	Specified on product label.
634896 (Not sold separately; sold as a part of 634889)	24 rxns	Specified on product label.
634897 (Not sold separately; sold as a part of 634890)	48 rxns	Specified on product label.
634898 (Not sold separately; sold as a part of 634891, 634892, 634893, 634894)	96 rxns	Specified on product label.

Description

SMART-Seq v4 Ultra Low Input RNA Kit for Sequencing Components are part of the fourth generation of SMARTer® Ultra Low products used to generate high-quality cDNA from ultra-low amounts of total RNA, or directly from 1–1,000 intact cells. The kit is tested with 10 pg of total RNA, and has been shown to perform robust cDNA synthesis from one cell (equivalent to 10 pg total RNA), generating data with the highest sensitivity compared to previous generations. This kit incorporates locked nucleic acid (LNA) technology and improves on the SMART-Seq2 method. cDNA libraries generated by this kit have been tested for compatibility with Ion Torrent and Illumina® sequencing platforms. SMART® technology offers unparalleled sensitivity and unbiased amplification of cDNA transcripts. Most importantly, SMART technology enriches for full-length transcripts and maintains the true representation of mRNA from the original sample, critical factors for transcriptome sequencing and gene expression analysis.

Package Contents

Package 1:

<u>634895</u> (12 rxns)	<u>634896</u> (24 rxns)	<u>634897</u> (48 rxns)	<u>634898</u> (96 rxns)	
5 µl	5 µl	5 µl	5 µl	Control Total RNA (1 µg/µl)

Package 2:

<u>634895</u> (12 rxns)	<u>634896</u> (24 rxns)	<u>634897</u> (48 rxns)	<u>634898</u> (96 rxns)	
12 µl	24 µl	48 µl	96 µl	SMART-Seq v4 Oligonucleotide (48 µM)
12 µl	24 µl	48 µl	96 µl	PCR Primer II A (12 µM)
48 µl	96 µl	192 µl	384 µl	5X Ultra Low First-Strand Buffer
24 µl	48 µl	96 µl	192 µl	SMARTScribe™ Reverse Transcriptase (100 U/µl)
24 µl	48 µl	96 µl	192 µl	3' SMART-Seq CDS Primer II A (12 µM)
30 µl	60 µl	120 µl	240 µl	RNase Inhibitor (40 U/µl)
2 x 1 ml	2 x 1 ml	2 x 1 ml	4 ml	Nuclease-Free Water
230 µl	460 µl	920 µl	1.85 ml	10X Lysis Buffer
12 µl	24 µl	48 µl	96 µl	AfaI (10 U/µl)
24 µl	48 µl	96 µl	192 µl	10X AfaI Buffer
1.7 ml	2 x 1.7 ml	6.8 ml	2 x 6.8 ml	Elution Buffer (10 mM Tris-Cl, pH 8.5)
24 µl	48 µl	96 µl	192 µl	0.1% BSA

Takara Bio USA, Inc.

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Certificate of Analysis

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SMART-Seq v4 Ultra Low Input RNA Kit for Sequencing Components

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Storage Conditions

- Store Control Total RNA at -70°C .
- Store 10X Lysis Buffer at -20°C . Once thawed, the buffer can be stored at 4°C .
- Store Elution Buffer at -20°C . Once thawed, the buffer can be stored at Room Temperature.
- Store all other reagents at -20°C .

Expiration Date

- Specified on product label.

Shipping Conditions

- Dry ice (-70°C)

Product Documents

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

The following documents apply to this product:

- SMART-Seq v4 Ultra Low Input RNA Kit for Sequencing User Manual

Quality Control Data

A sample kit from each lot was tested as follows: 10 pg of Control Total RNA were subjected to first-strand cDNA synthesis as described in the SMART-Seq v4 Ultra Low Input RNA Kit for Sequencing User Manual. The first-strand cDNA was then used as template for PCR using 17 cycles. PCR products were purified with a NucleoMag NGS Clean-up and Size Select kit (Takara Bio USA, Catalog No. 744970), and resuspended in 17 μl of Elution Buffer. 1 μl of the PCR reaction was analyzed with an Agilent 2100 Bioanalyzer and a High Sensitivity DNA Kit (Agilent, Cat. No. 5067-4626). The resultant analysis indicated the cDNA size range was approximately 300 bp to 10,000 bp. A peak was manually integrated from 300 bp to 9,000 bp. To calculate the total cDNA output, the concentration, defined by Bioanalyzer software, was multiplied by 17 μl . Outputs ranged from 3.4–17 ng.

Quality Control Data for Afal

1. Overdigestion Test: Non-specific nuclease activity was not detected after incubation of 1 μg of λDNA with excess amount of this enzyme for 24 hr in 50 μl of the supplied buffer at 37°C as evaluated by agarose gel electrophoresis.
2. Ligation-Recutting Test: After 10-fold overdigestion with this enzyme, the DNA fragments could be ligated with T4 DNA ligase and could be recut with this enzyme.

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

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CATALOG NOS.

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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.

Your use of this product is also subject to compliance with the licensing requirements, listed below if applicable, and described on the product's web page at <http://www.takarabio.com>. It is your responsibility to review, understand and adhere to any restrictions imposed by these statements.

STATEMENT 275

SMART-Seq2 Technology. This product is sold under exclusive license from Ludwig Institute of Cancer Research, Ltd. and is covered by US Patent No. 10266894, Japanese Patent No. 6336080, and European Patent No. 3036336, and pending U.S. patent application and/or pending claims of foreign counterparts. For license information, please contact a Takara Bio USA, Inc. licensing representative by phone at 650.919.7320 or by e-mail at licensing@takarabio.com.

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