

## SMART-Seq® v4 3' DE Kit Components

Catalog Nos.	Amount	Lot Number
635042 (Not sold separately; sold as a part of 635040)	96 rxns	Specified on product label.
635043 (Not sold separately; sold as a part of 635041)	192 rxns	Specified on product label.

### Description

As part of the SMART-Seq v4 3' DE Kit, the SMART-Seq v4 3' DE Kit Components include the necessary reagents to generate high-quality cDNA from 1–100 intact cells or ultra-low amounts of total RNA. The cDNA generated from each reaction has a cell barcode that allows for pooling downstream. This kit uses the SMART-Seq v4 technology with locked nucleic acids (LNA) for excellent sensitivity and reproducibility. Additionally, this kit includes a complete set of index primers for downstream library preparation. By focusing the majority of cDNA fragments on the 3' end of mRNA transcripts, this kit enables differential expression (DE) analysis with fewer reads, reducing the cost of discovery. When combined with the Illumina® Nextera® XT DNA Library Preparation Kit, this kit results in a library ready for sequencing on Illumina platforms.

### Package Contents

#### Package 1:

<u>635042</u>	<u>635043</u>	
(96 rxns)	(192 rxns)	
5 µl	5 µl	Control Total RNA (1 µg/µl)

#### Package 2:

<u>635042</u>	<u>635043</u>	
(96 rxns)	(192 rxns)	
144 µl	288 µl	SMART-Seq v4 Oligonucleotide (48 µM)
144 µl	288 µl	PCR Primer II A (12 µM)
576 µl	1.2 ml	5X Ultra® Low First-Strand Buffer
288 µl	576 µl	SMARTScribe™ Reverse Transcriptase (100 U/µl)
4 ml	2 x 4 ml	Nuclease-Free Water
250 µl	500 µl	RNase Inhibitor (40 U/µl)
420 µl	840 µl	10X Lysis Buffer
3 ml	6 ml	Elution Buffer (10 mM Tris-Cl, pH 8.5)
20 µl	40 µl	Oligo dT In-line 1 Primer (IL1; 12 µM)
20 µl	40 µl	Oligo dT In-line 2 Primer (IL2; 12 µM)
20 µl	40 µl	Oligo dT In-line 3 Primer (IL3; 12 µM)
20 µl	40 µl	Oligo dT In-line 4 Primer (IL4; 12 µM)
20 µl	40 µl	Oligo dT In-line 5 Primer (IL5; 12 µM)
20 µl	40 µl	Oligo dT In-line 6 Primer (IL6; 12 µM)
20 µl	40 µl	Oligo dT In-line 7 Primer (IL7; 12 µM)
20 µl	40 µl	Oligo dT In-line 8 Primer (IL8; 12 µM)

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# Certificate of Analysis

SMART-Seq v4 3' DE Kit Components

Cat. Nos. 635042 & 635043

Sold as a part of 635040 & 635041

<u>635042</u>	<u>635043</u>	(Package 2 continued)
(96 rxns)	(192 rxns)	
20 µl	40 µl	Oligo dT In-line 9 Primer (IL9; 12 µM)
20 µl	40 µl	Oligo dT In-line 10 Primer (IL10; 12 µM)
20 µl	40 µl	Oligo dT In-line 11 Primer (IL11; 12 µM)
20 µl	40 µl	Oligo dT In-line 12 Primer (IL12; 12 µM)

## Package 3:

### 635042 & 635043 (96 rxns & 192 rxns)

12 µl	Reverse PCR Primer HT Index 1 (R1; 10 µM)
12 µl	Reverse PCR Primer HT Index 2 (R2; 10 µM)
12 µl	Reverse PCR Primer HT Index 3 (R3; 10 µM)
12 µl	Reverse PCR Primer HT Index 4 (R4; 10 µM)
12 µl	Reverse PCR Primer HT Index 5 (R5; 10 µM)
12 µl	Reverse PCR Primer HT Index 6 (R6; 10 µM)
12 µl	Reverse PCR Primer HT Index 7 (R7; 10 µM)
12 µl	Reverse PCR Primer HT Index 8 (R8; 10 µM)
12 µl	Reverse PCR Primer HT Index 9 (R9; 10 µM)
12 µl	Reverse PCR Primer HT Index 10 (R10; 10 µM)
12 µl	Reverse PCR Primer HT Index 11 (R11; 10 µM)
12 µl	Reverse PCR Primer HT Index 12 (R12; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 1 (TnF1; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 2 (TnF2; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 3 (TnF3; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 4 (TnF4; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 5 (TnF5; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 6 (TnF6; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 7 (TnF7; 10 µM)
15 µl	Tn Forward PCR Primer HT Index 8 (TnF8; 10 µM)

## Storage Conditions

- Store Control Total RNA at  $-70^{\circ}\text{C}$ .
- Store 10X Lysis Buffer at  $-20^{\circ}\text{C}$ . Once thawed, the buffer can be stored at  $4^{\circ}\text{C}$ .
- Store 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

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## Product Documents

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

The following documents apply to this product:

- SMART-Seq v4 3' DE Kit 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 3' DE Kit User Manual in technical triplicate. The first-strand cDNA was then used as template for PCR using 16 cycles. PCR products in triplicate were mixed together and then purified twice with an Agencourt AMPure XP Kit (Beckman Coulter, Part No. A63880 or A63881). The products were resuspended in 12  $\mu$ l of Elution Buffer. 1  $\mu$ l 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 300–9,000 bp. To calculate the total cDNA output, the concentration, defined by Bioanalyzer software, was multiplied by 12  $\mu$ l. Outputs ranged from 2.4–12 ng.

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

## SMART-Seq® v4 3' DE Kit Components

### CATALOG NOS.

635042 & 635043

### 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 275

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