

SMART-Seq® Stranded Kit Components

Catalog Nos.	Amount	Lot Number
634445 (Not sold separately; sold as a part of 634442)	12 rxns	Specified on product label.
634446 (Not sold separately; sold as a part of 634443)	48 rxns	Specified on product label.
634447 (Not sold separately; sold as a part of 634444)	96 rxns	Specified on product label.

Description

The SMART-Seq Stranded Kit Components are used with Illumina® HT indexing primers as part of the SMART-Seq Stranded Kit to generate strand-specific RNA-seq libraries for Illumina sequencing from 1–1,000 cells or 10 pg–10 ng of purified total RNA. This kit incorporates Takara Bio’s SMART® (Switching Mechanism at the 5’ end of RNA Template) technology and includes refinements to the SMARTer® method for stranded RNA-seq that simplify the library preparation workflow and improve sequencing performance. In addition, contrary to the SMART-Seq mRNA kits, reverse transcription is initiated using random priming instead of oligo(dT) priming, thus capturing the full transcriptome instead of only the polyadenylated fraction. The SMART-Seq Stranded Kit was specifically designed to deliver highly sensitive and reproducible data from single cells while keeping the workflow short and user friendly. The kit does not require additional rRNA removal methods or kits and produces sequencing libraries that retain strand-of-origin information. The integrated removal of cDNAs derived from rRNA—typically present in high abundance following cDNA synthesis from total RNA inputs—makes the workflow extremely sensitive, yielding data that is highly reproducible with low mapping to rRNA.

Package Contents

Package 1:

634445 (12 rxns)	634446 (48 rxns)	634447 (96 rxns)	
55 µl	225 µl	450 µl	SMART scTSO Mix*
20 µl	80 µl	160 µl	scR-Probes*
5 µl	5 µl	5 µl	Control Total RNA (1 µg/µl)

Package 2:

634445 (12 rxns)	634446 (48 rxns)	634447 (96 rxns)	
20 µl	80 µl	160 µl	scZapR
15 µl	55 µl	110 µl	SMART scN6*
50 µl	200 µl	400 µl	scRT Buffer
25 µl	100 µl	200 µl	SMARTScribe™ RT (100 U/µl)
10 µl	40 µl	80 µl	RNase Inhibitor (40 U/µl)
50 µl	200 µl	400 µl	ZapR® Buffer (10X)
50 µl	200 µl	2 x 200 µl	SeqAmp™ DNA Polymerase
1.25 ml	4 x 1.25 ml	10 ml	SeqAmp CB PCR Buffer (2X)
1.25 ml	1.25 ml	2 x 1.25 ml	Tris Buffer (5 mM)
50 µl	200 µl	400 µl	PCR2 Primers
1.25 ml	4 x 1.25 ml	10 ml	Nuclease-Free Water
0.5 ml	1 ml	1 ml	10X Lysis Buffer

*Takara Bio proprietary sequences

Takara Bio USA, Inc.

2560 Orchard Parkway, San Jose, CA 95131, USA

U.S. Technical Support: technical_support@takarabio.com

United States/Canada 800.662.2566 (012225)	Asia Pacific +1.650.919.7300	Europe +33.(0)1.3904.6880	Japan +81.(0)77.565.6999
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Certificate of Analysis

SMART-Seq Stranded Kit Components (Not sold separately)

Cat. Nos. 634445, 634446 & 634447

Sold as a part of 634442, 634443 & 634444

Storage Conditions

- Store Package 1 at -70°C .
- Store all other components at -20°C .
- Do not freeze scR-Probes more than 3 times. We recommend aliquoting scR-Probes into multiple vials to avoid repeated freeze/thaw cycles.

Expiration Date

- Specified on product label.

Shipping Conditions

- Dry ice

Product Documents

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

The following documents apply to this product:

- SMART-Seq Stranded Kit User Manual

Quality Control Data

To assess the quality of the reagents in the SMART-Seq Stranded Kit Components, 10 pg of Control Total RNA (Human Brain) was converted to an Illumina-ready cDNA sequencing library with the SMART-Seq Stranded Kit as described in the User Manual, using 10 cycles in PCR1 and 13 cycles in PCR2. Purified libraries were quantified using the Qubit 2.0 Fluorometer (Life Technologies) with a dsDNA HS Assay Kit, resulting in an output of at least 3 ng/ μl . Libraries were diluted to 1.5 ng/ μl , and 1 μl of the dilution was analyzed with an Agilent Bioanalyzer and High Sensitivity DNA Kit (Agilent, Cat. No. 5067-4626). The Bioanalyzer electropherogram showed a broad distribution from 200 bp to 2,000 bp with a peak summit between 300 and 400 bp, and an average size in the 350–510 bp range. The libraries were sequenced on an Illumina platform and confirmed to contain less than 15% of the reads mapping to rRNA (5S, 5.8S, 18S, and 28S) and less than 2% of the reads mapping to mitochondrial ribosomal RNA (m12S and m16S).

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

SMART-Seq® Stranded Kit Components

CATALOG NOS.

634445, 634446 & 634447

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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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This Product is sold under license from JumpCode Genomics, Inc., and is covered by one or more of the following US patents and foreign counterparts as well as pending US and foreign patent applications: 10,604,802; 11,708,606; 11,761,039; PCT/US2015/014242; CA2938669; EP 20192599.7; HK402021031164.3.

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