

SMART® cDNA Library Construction Kit

Catalog No.	Amount	Lot Number
634901	Each	Specified on product label.

Description

A kit for making seven cDNA libraries from nanogram amounts of total or poly A⁺ RNA. The kit utilizes the proprietary SMART (Switching Mechanism At 5' end of RNA Template) Oligonucleotide to generate high yields of full-length ds cDNA. Control Poly A⁺ RNA, Control Insert and pre-digested λTriplEx2 are included.

Package Contents

Box 1:

- 10 µl SMART IV Oligonucleotide (12 µM)
- 5 µl Control Poly A⁺ RNA (1.0 µg/µl)
- 500 µl *E. coli* BM25.8 (in 25% glycerol)
- 500 µl *E. coli* XL1-Blue (in 25% glycerol)

Box 2:

- 10 µl SMARTScribe™ MMLV Reverse Transcriptase (100 units/µl)
- 25 µl CDS III/3' PCR Primer (12 µM)
- 30 µl 5X First-Strand Buffer
- 20 µl DTT (20 mM)
- 60 µl Glycogen (20 µg/µl)
- 20 µl 5' PCR Primer (12 µM)
- 20 µl Proteinase K (≥600 mAnsonU/ml)
- 80 µl SfiI Enzyme (20 units/µl)
- 80 µl 10X SfiI Buffer
- 10 µl 100X BSA
- 30 µl λTriplEx2 SfiI (A & B) Arms (0.5 µg/µl)
- 20 µl T4 DNA Ligase (400 units/µl)
- 30 µl 10X DNA Ligation Buffer
- 20 µl ATP (10 mM)
- 5 µl Control Insert (SfiI A & B) (50 ng/µl)
- 60 µl 5' Sequencing Primer (20 µM)
- 60 µl 3' Sequencing Primer (20 µM)
- 20 µl dNTP Mix (10 mM of each dNTP)

Takara Bio USA, Inc.

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- 200 µl Sodium Acetate (3 M; pH 4.8)
- 20 µl Sodium Hydroxide (25 mM)

Box 3:

- 10 CHROMA SPIN™-400 Columns
- 30 ml 1X Fractionation Column Buffer
- 5 ml Deionized H₂O (Milli-Q-filtered)

Storage Conditions

- Store CHROMA SPIN-400, 1X Fractionation Column Buffer and Deionized H₂O at Room temperature.
- Store the BM25.8 and XL1-Blue *E. coli* host strains, the Control Poly A⁺ RNA, and the SMART IV Oligo at -70°C.
- Store all other components at -20°C.

Shelf Life

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

Shipping Conditions

- Box 1: Dry ice (-70°C)
- Box 2: Dry ice (-70°C)
- Box 3: Room temperature

Product Documents

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

The following documents apply to this product:

- SMART cDNA Library Construction Kit User Manual (PT3000-1)
- SMART cDNA Library Construction Kit Protocol-at-a-Glance (PT3000-2)
- λTriplEx2 Vector Information (PT3194-5)

Quality Control Data

0.5, 1.0, and 1.5 µl of SMART cDNA were separately ligated to 1 µl (0.5 µg/µl) of SfiI (A & B)-digested, dephosphorylated λTriplEx2 Arms, according to the User Manual. Each ligation reaction was packaged into λ phage particles using a commercially supplied λ packaging system and transduced into a culture of XL1-Blue *E. coli*, according to the manufacturer's recommendations. Ligation reactions produced 1–2 x 10⁶ clones with a recombination efficiency of ≥80%, determined by blue/white screening.

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

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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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