

SMARTScribe™ Reverse Transcriptase

Catalog Nos.	Amount	Lot Number
639536	40 rxns	Specified on product label.
639537	100 rxns	Specified on product label.
639538	400 rxns	Specified on product label.

Description

SMARTScribe Reverse Transcriptase (RT) is a modified Moloney Murine Leukemia Virus (MMLV or MoMuLV) Reverse Transcriptase that synthesizes full-length cDNA from rare or long transcripts. SMARTScribe RT preparations are exceptionally pure, with all contaminating nucleases removed. The enzyme is useful for a wide range of applications and has been specially formulated for use with Takara Bio SMART® kits.

Package Contents

<u>639536</u> (40 rxns)	<u>639537</u> (100 rxns)	<u>639538</u> (400 rxns)	
40 µl	100 µl	4 x 100 µl	SMARTScribe RT
1 ml	1 ml	2 x 1 ml	5X First-Strand Buffer
500 µl	500 µl	2 x 500 µl	20 mM DTT

Storage Conditions

- Store at -20°C.

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:

- SMARTScribe Reverse Transcriptase Protocol-At-A-Glance

Quality Control Data

This lot of purified SMARTScribe RT was tested to ensure the quality and performance of the enzyme.

Raw Material Quality Control: Ribonuclease Contamination Assay

To ensure the absence of ribonucleases, SMARTScribe RT was incubated with an RNA ladder under conditions typical for first-strand cDNA synthesis (excluding primer and dNTPs). In this assay, 1 µl of SMARTScribe RT was incubated with 3 µg of an RNA ladder for 1 hr at 37°C. Following incubation, the sample was analyzed by electrophoresis on a formaldehyde-agarose gel. No degradation of the RNA bands was observed when compared to a control sample containing RNA and buffer but no enzyme.

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 (021723)	Asia Pacific +1.650.919.7300	Europe +33.(0)1.3904.6880	Japan +81.(0)77.565.6999
--	---------------------------------	------------------------------	-----------------------------

Certificate of Analysis

Cat. Nos. 639536, 639537 & 639538

SMARTScribe Reverse Transcriptase

Functional Quality Control

SMART RACE cDNA Amplification:

5' and 3' SMART RACE reactions were performed using SMARTScribe RT, Mouse Heart Total RNA, and our SMARTer® RACE 5'/3' Kit (Cat. Nos. 634858 & 634859). The products were separated on an agarose gel and visualized by UV illumination. At a minimum, the 5' and 3' RACE reactions produced 2.1 kb and 3.1 kb products, respectively, from 50 ng of template RNA. Controls for both the 5' and 3' RACE reactions produced a 0.38 kb fragment.

First-strand cDNA Synthesis:

SMARTScribe RT and a modified oligo(dT)18 primer were used to reverse transcribe a ladder of eight poly A⁺ RNA transcripts ranging in size from 0.5–10 kb. Following a 1 hr incubation at 42°C, the products were separated on an agarose-EtBr stained gel and visualized by UV illumination. At a minimum, distinct bands with minimal smearing were observed for all cDNAs up to 10 kb.

Additional Testing

This preparation of SMARTScribe RT was further analyzed to ensure the absence of the following contaminants:

- Endonucleases: none detected
- Exonucleases: none detected
- DNA contamination: none detected

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

SMARTScribe™ Reverse Transcriptase

CATALOG NOS.

639536, 639537 & 639538

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.

TRADEMARKS:

©2023 Takara Bio Inc. All Rights Reserved.

All trademarks are the property of Takara Bio Inc. or its affiliate(s) in the U.S. and/or other countries or their respective owners. Certain trademarks may not be registered in all jurisdictions.

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

Asia Pacific

+1.650.919.7300

Europe

+33.(0)1.3904.6880

Japan

+81.(0)77.565.6999

2/17/2023