

SMARTScribe™ Reverse Transcriptase

Catalog No.	Amount	Lot Number
639535 (Not sold separately)	10 rxns	Specified on product label.

Description

SMARTScribe Reverse Transcriptase is a modified Moloney Murine Leukemia Virus 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 all of our SMART® Kits.

Package Contents

- 10 µl SMARTScribe RT (100 U/µl)
- 1 ml 5X First-Strand Buffer
- 500 µl 20 mM DTT

Storage Conditions

- Store at -20°C

Shelf Life

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

Shipping Conditions

- Dry ice (-70°C)

Product Documents

Documents for Clontech® products are available for download at www.clontech.com/manuals
The following documents apply to this product:

- SMARTScribe Reverse Transcriptase Protocol-at-a-Glance (PT4080-2)

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.

Clontech Laboratories, Inc.

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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 nine poly A+ RNA transcripts ranging in size from 0.5 to 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. Functional analysis :

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

SMARTScribe™ Reverse Transcriptase (Sample-Not for Sale)

CATALOG NO.

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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 Clontech Laboratories, Inc.

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