Invitrogen™
life technologies

Generate high cDNA yields in a convenient first-strand kit format

The SuperScript™ III First-Strand Synthesis System for RT-PCR delivers increased cDNA yields, high sensitivity, and full-length transcripts in a convenient format. You get all of the components you need for successful first-strand cDNA synthesis, saving you time and ensuring your success with every experiment.

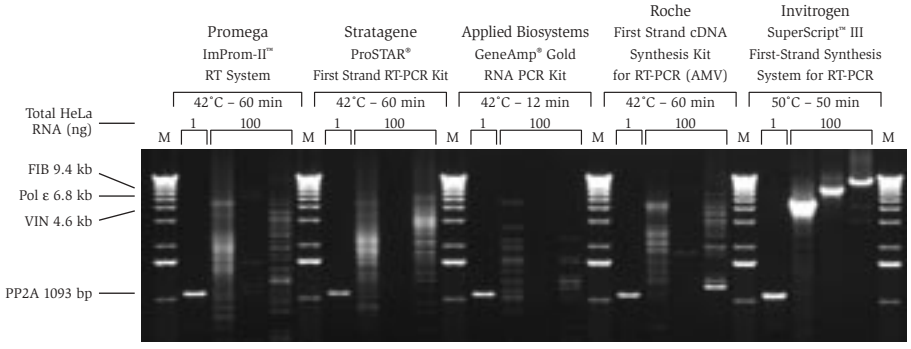
SuperScript™ III RT gives you more

SuperScript™ III reverse transcriptase (RT) is an RNase H$^-$ point mutant of SuperScript™ II RT. It exhibits a longer half-life and an increased thermostability to 55˚C. Included in the SuperScript™ III First-Strand Synthesis System, this robust RT is active for 220 min. at 50˚C, giving you greater success with RNA secondary structure and increased priming specificity with gene-specific primers. You'll also get high cDNA yields, full-length transcripts (up to 12.3 Kb), and sensitivity to 1.0 pg total RNA. Figure 1 shows the superior yields of the SuperScript™ III First-Strand Synthesis System compared to other first-strand kits.

Everything you need to succeed

The SuperScript™ III First-Strand Synthesis System conveniently provides all the necessary components for optimal first-strand cDNA synthesis. With everything ready to go, you can start generating high-quality first-strand cDNA from total or poly(A)$^+$ RNA right away. You save time and get results faster.

Figure 1 – The SuperScript™ III First-Strand Synthesis System outperforms the competition

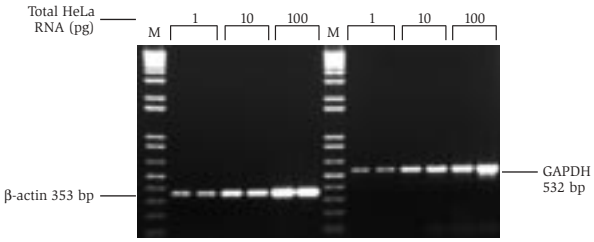


RT reactions containing 1 and 100 ng of total HeLa RNA were performed with each kit using reagents and conditions specified in each manufacturer's protocol. Ten percent (2-5 µl) of the resulting cDNA was added to PCR reactions containing 1 unit of Platinum® *Taq* DNA Polymerase High Fidelity for 35 PCR cycles, 1 min/kb. PCR products were separated on a 1% agarose gel containing 0.4 µg/ml ethidium bromide.

Small samples, big results

The SuperScript™ III First-Strand Synthesis System is optimized for low-input samples. You can detect as little as 50 to 100 molecules of RNA template from samples as small as 1.0 pg total RNA (Figure 2). Used with PCR, this functionally tested system enables you to detect rare messages and generate enough material for cloning.

Figure 2 – The SuperScript™ III First-Strand Synthesis System is optimized for small samples

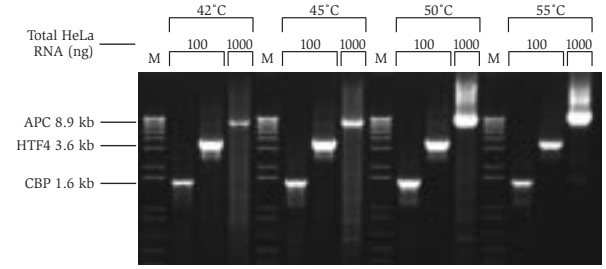


cDNA was synthesized from 1, 10, and 100 pg of total HeLa RNA using the SuperScript™ III First-Strand Synthesis System for RT-PCR. Two microliters of the resulting cDNA were added to 50 µl PCR reactions containing 2 units of Platinum® *Taq* DNA Polymerase and β-actin or GAPDH primer sets for 40 PCR cycles, 1 min/kb. PCR products were separated on a 1% agarose gel containing 0.4 µg/ml of ethidium bromide.

High temperature, high value

SuperScript™ III RT is active up to 55˚C, making it ideal for use with gene-specific primers with a high T_m. At this temperature it delivers increased specificity, high yield, and low background with various template sizes (Figure 3), something that other RTs with lower thermostability just can't do. The high thermostability of SuperScript™ III RT also means the secondary structure associated with GC-rich RNA templates is not a problem.

Figure 3 – The SuperScript™ III First-Strand Synthesis System gives you increased specificity with gene-specific primers



cDNA was synthesized from 100 or 1000 ng of total HeLa RNA using the SuperScript™ III First-Strand Synthesis System and gene-specific primers. Two microliters of the resulting cDNA were added to PCR reactions containing 1 unit of Platinum® *Taq* DNA Polymerase High Fidelity for 35 PCR cycles, 1 min/kb.

Order Today

Get results faster and ensure your success with every RT experiment. Call Invitrogen and order the SuperScript™ III First-Strand Synthesis System for RT-PCR today.

Product Ordering Information	Quantity	Cat. no.
SuperScript™ III First-Strand Synthesis System for RT-PCR*	50 rxns	18080-051

*Includes RT buffer, oligo $(dT)_{20}$, random hexamers, dNTP mix, RNaseOUT™, $MgCl_2$, DTT, RNase H, DEPC-treated H_2O, and total HeLa RNA control with primers.

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