

AMPLIFICATION

iScript™ Select cDNA Synthesis Kit

High-Fidelity Reverse Transcriptase Kit with Flexible Priming Options



The iScript Select cDNA Synthesis Kit is a sensitive reverse transcription kit optimized for RT-PCR applications that require high fidelity, including cloning, sequencing, and next-generation sequencing (NGS). This kit is also designed to perform in RT-qPCR reactions that require flexible priming options during cDNA synthesis.

Key Features and Benefits

- **Allows for flexible RNA priming strategies** — oligo(dT), random primer, and gene-specific primer enhancer solution provided in separate tubes
- **Minimize error rate** — powerful enzyme and proprietary buffer achieve a high rate of fidelity during cDNA synthesis (Figure 1)
- **Detect low-level target genes and conserve RNA** — broad linear dynamic range of total input RNA (1 µg–1 pg)
- **Synthesize long cDNAs** — efficiently synthesize cDNA greater than 8 kb (Figure 2)

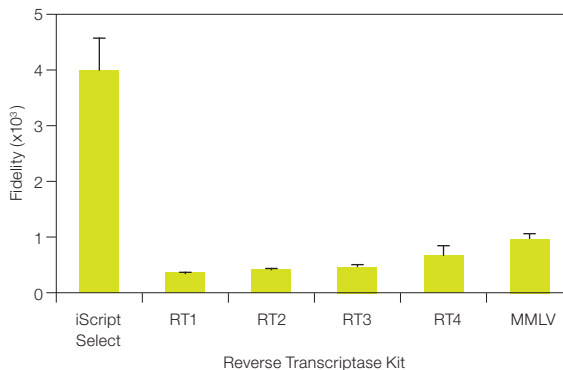


Fig. 1. The iScript Select Kit demonstrates superior fidelity when compared to several other commonly used reverse transcriptases. A partial fragment of the ampicillin gene was reverse transcribed using one of six different commonly used reverse transcriptases according to manufacturer's instructions. PCR was performed using Bio-Rad's iProof™ High-Fidelity Master Mix. Resulting amplicons were sequenced using the Illumina MiSeq platform. For each sample, 10 million bases of valid reads with three or more repeats were obtained. Fidelity of each reverse transcriptase was determined by taking the inverse of the error rate. Mean accuracy of four replicates is shown. Error bars are standard errors of four replicates.

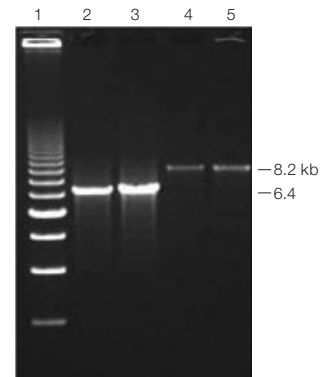


Fig. 2. The iScript Select cDNA Synthesis Kit facilitates synthesis of cDNA longer than 8 kb. First-strand cDNA was produced from 1 µg total RNA using the iScript Select cDNA Synthesis Kit and the provided oligo(dT) primer mix. A 2 µl aliquot of the 20 µl cDNA synthesis reaction was subjected to 35 PCR cycles using a proofreading high-fidelity polymerase and human adenomatous polyposis coli (APC) primer sets. From a 50 µl PCR reaction, 10 µl was analyzed on a 1% agarose gel. Lane 1, 1 kb ladder; lanes 2 and 3, 6.4 kb APC PCR product; lanes 4 and 5, 8.2 kb APC PCR product.



The Simplest and Most Straightforward High-Fidelity Reverse Transcription Protocol

Our powerful enzyme with proprietary buffer formulation powers through difficult targets and secondary structure, eliminating the need to heat denature RNA and primers. Removing this protocol step leads to:

- Less time pipetting
- Fewer opportunities for mistakes
- Reduced risk of contamination

BIO-RAD'S HIGH-FIDELITY RT KIT	OTHER HIGH-FIDELITY RT KITS
iScript Select cDNA Synthesis Kit	Agilent AccuScript High Fidelity 1st Strand cDNA Synthesis Kit Roche Transcriptor High Fidelity cDNA Synthesis Kit Takara PrimeScript High Fidelity RT-PCR Kit
<p>PRE-INCUBATION</p> <p>Not required. Proceed directly to reverse transcription.</p>	<p>Add RNA, primers, and dNTPs</p>
	<p>Incubate at 65°C</p>
	<p>Cool and spin down sample</p>
<p>REVERSE TRANSCRIPTION</p> <p>Add RT and other reaction components</p>	<p>Add RT and other reaction components</p>
<p>First-strand synthesis and enzyme inactivation</p>	<p>First-strand synthesis and enzyme inactivation</p>

Ordering Information

Catalog #	Description
1708896	iScript Select cDNA Synthesis Kit, 25 x 20 µl reactions
1708897	iScript Select cDNA Synthesis Kit, 100 x 20 µl reactions
1708897BUN	iScript Select cDNA Synthesis Kit, 500 x 20 µl reactions
1725310	iProof™ HF Master Mix, 100 x 50 µl reactions, 2.5 ml

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Purchase of iProof DNA Polymerase includes an immunity from suit under patents specified in the iProof DNA Polymerase product insert to use only the amount purchased for the purchaser's own internal research. No other patent rights are conveyed expressly, by implication, or by estoppel. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA

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