AMPLIFICATION: PCR REAGENTS

iScript Reverse Transcription Kits

Get the Most Out of Your cDNA Synthesis

Choose the best cDNA synthesis kit for your application, with formulations optimized for ease, yield, flexibility, fidelity, or genomic DNA (gDNA) clearance. Bio-Rad's iScript Reverse Transcription (RT) Kits provide fast and sensitive first-strand cDNA synthesis with high reproducibility.

- Highly efficient cDNA synthesis with high-quality results
- RNase H+ for accurate representation of gene expression
- RNase inhibition prevents RNA degradation

RNase H function. RNase H works to degrade RNA that is hybridized to DNA. During cDNA synthesis, the RNase H domain of the Moloney murine leukemia virus (MMLV) reverse transcriptase degrades the template RNA as the cDNA is synthesized. This activity ensures the one-to-one conversion of RNA into cDNA molecules.

Which iScript Is My iScript?

Feature	1 TUBE **Minimum Setup Time** MOST POPULAR	gDNA CLEAR **Effective gDNA Elimination before RT**	HIGH RNA INPUT **Maximum Input RNA for High cDNA Yields**	HIGH FIDELITY **Flexible Priming Options and High Fidelity**	CLASSIC **Reliable Value Solution**
Product	iScript Reverse Transcription Supermix for RT-qPCR	iScript gDNA Clear cDNA Synthesis Kit	iScript Advanced cDNA Synthesis Kit for RT-qPCR	iScript Select cDNA Synthesis Kit	iScript cDNA Synthesis Kit
Applications	▪ Gene expression ▪ RNA quantification	▪ Gene expression ▪ RNA quantification	▪ Gene expression ▪ RNA quantification	▪ Cloning ▪ Sequencing and next-generation sequencing ▪ Gene expression ▪ RNA quantification	▪ Gene expression ▪ RNA quantification
Total input RNA	1 µg–1 pg	1 µg–1 pg	7.5 µg–100 fg	1 µg–1 pg	1 µg–100 fg
Format	1 tube	3 tubes	2 tubes	5 tubes	2 tubes
Kit contents	▪ 5x iScript RT Supermix ▪ No-RT control supermix	▪ 5x iScript RT Supermix ▪ No-RT control supermix ▪ DNase ▪ DNase buffer	▪ iScript Reverse Transcriptase ▪ 5x iScript Advanced Reaction Mix	▪ iScript Reverse Transcriptase ▪ 5x iScript Reaction Mix ▪ 3 priming options	▪ iScript Reverse Transcriptase ▪ 5x iScript Reaction Mix
Time to produce cDNA	26 min	36 min	21 min	15–65 min	26 min
RNase H+ activity	✔	✔	✔	✔	✔

Visit bio-rad.com/myiScriptRTkit for more information.

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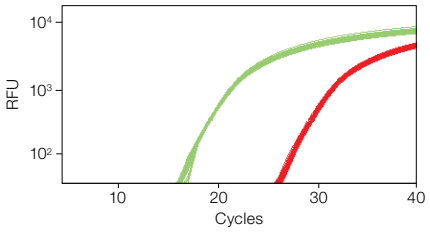
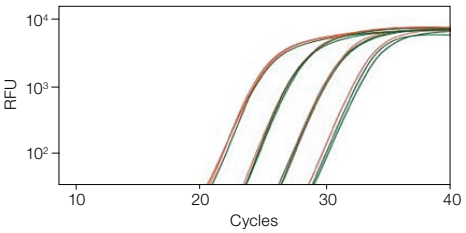
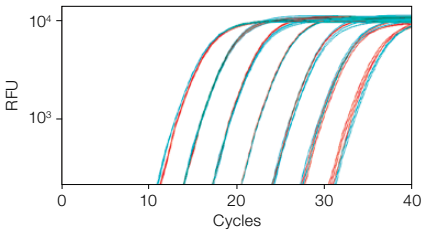
Unmatched Performance



Excellent data reproducibility. Forty-eight replicate cDNA synthesis reactions were prepared using the iScript Reverse Transcription Supermix for RT-qPCR and 100 ng (■) and 100 pg (■) of total RNA. A 160 bp fragment of the *PGK-1* gene was amplified from one-tenth of each of the resulting cDNA syntheses using SsoFast Probes Supermix on a CFX96 Real-Time PCR Detection System. Low standard deviations across the replicate cDNA synthesis reactions demonstrate exceptional data reproducibility. 100 ng RNA (■): mean Cq = 21.35 and SD = 0.123; 100 pg RNA (■): mean Cq = 31.56 and SD = 0.147. Cq, quantification cycle; RFU, relative fluorescence units; SD, standard deviation (in Cq).



Unbiased representation of 3' and 5' transcript regions. Reverse transcription of 100, 10, 1, and 0.1 ng input RNA was performed with iScript Reverse Transcription Supermix for RT-qPCR. Primer pairs were designed to the 5' (■, ~60 bp) and 3' (■, ~70 bp) ends of the *MAP* gene, and quantitative PCR (qPCR) was performed with one-tenth of the cDNA as input for the iTaq Universal SYBR® Green Supermix. There were no significant differences (<0.5 Cq difference) observed between the 5' and 3' assays. RFU, relative fluorescence units.



Broad linear dynamic range. Reverse transcription was performed from a tenfold dilution series of a human universal reference RNA (1 µg–1 pg) using the iScript cDNA Synthesis Kit (■) and the iScript Reverse Transcription Supermix for RT-qPCR (■). Amplification was performed in triplicate from one-tenth of the resulting cDNA using SsoAdvanced Universal SYBR® Green Supermix and the *GAPDH* PrimePCR Gene Expression Assay on a CFX96 Real-Time PCR Detection System. iScript cDNA Synthesis Kit: R^2 = 0.999, efficiency = 100.4%, and slope = –3.31; iScript Reverse Transcription Supermix for RT-qPCR: R^2 = 0.999, efficiency = 98.2%, and slope = –3.37. RFU, relative fluorescence units.

Need to Reliably Detect Low-Copy Targets in Limited Sample Material?

The new iScript Explore One-Step RT and PreAmp Kit generates preamplified cDNA directly from RNA in a single step, enabling unbiased target-specific preamplification of up to 100 targets.

Single Step

Go directly from RNA to preamplified cDNA in one step.

gDNA Clearance

Amplify only your target of interest.

Reaction Booster

Benefit from enhanced RT performance.

Visit bio-rad.com/iScriptExplore for more information.

Ordering Information

Kit Size	iScript Reverse Transcription Supermix for RT-qPCR	iScript gDNA Clear cDNA Synthesis Kit	iScript Advanced cDNA Synthesis Kit for RT-qPCR	iScript Select cDNA Synthesis Kit	iScript cDNA Synthesis Kit	iScript Explore One-Step RT and PreAmp Kit
25 x 20 µl reactions	1708840	1725034	1725037	1708896	1708890	—
100 x 20 µl reactions	1708841	1725035	1725038	1708897	1708891	—
500 x 20 µl reactions	1708841BUN	1725035BUN	1725038BUN	1708897BUN	1708891BUN	—
50 x 50 µl reactions	—	—	—	—	—	12004856
250 x 50 µl reactions	—	—	—	—	—	17002826

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