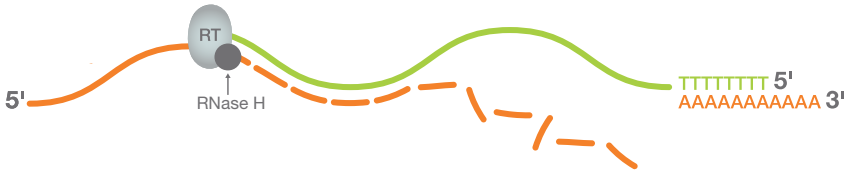
AMPLIFICATION: PCR REAGENTS

# iScript™ Reverse Transcription Kits

## Get the Most Out of Your cDNA Synthesis

Bio-Rad's iScript Reverse Transcription (RT) Kits provide fast and sensitive first-strand cDNA synthesis with high reproducibility. The combination of RNase H+ enhanced activity and RNase inhibitor yields reliable data for your experiments.

- 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.

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

## Which iScript Is My iScript?

| Feature | RECOMMENDED<br>Minimum Reaction Setup Time | NEW<br>Effective gDNA Removal before RT | Maximum RNA Input for High cDNA Yields | Flexible Priming Options | 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<br>▪ RNA quantification | ▪ Gene expression<br>▪ RNA quantification | ▪ Gene expression<br>▪ RNA quantification | ▪ Gene expression<br>▪ Cloning<br>▪ RNA quantification | ▪ Gene expression<br>▪ 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<br>▪ No-RT control supermix | ▪ 5x iScript RT Supermix<br>▪ No-RT control supermix<br>▪ DNase<br>▪ DNase buffer | ▪ iScript Reverse Transcriptase<br>▪ 5x iScript Advanced Reaction Mix | ▪ iScript Reverse Transcriptase<br>▪ 5x iScript Reaction Mix<br>▪ 3 priming options | ▪ iScript Reverse Transcriptase<br>▪ 5x iScript Reaction Mix |
| Time to produce cDNA | 26 min | 36 min | 21 min | 40–90 min | 26 min |
| RNase H+ activity | ✔ | ✔ | ✔ | ✔ | ✔ |

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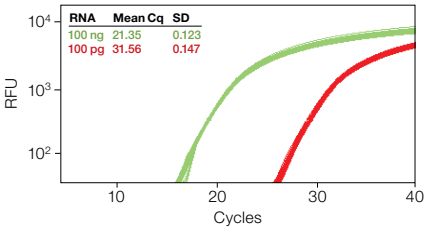
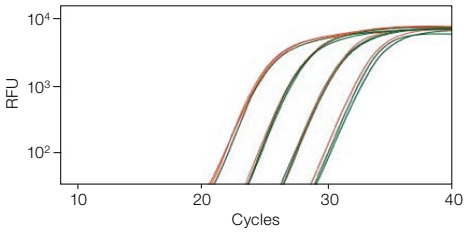
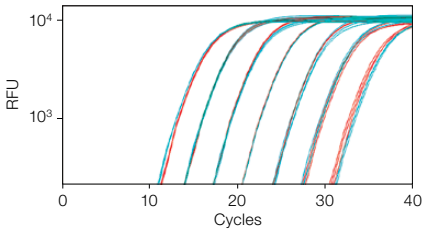
## Unmatched Performance




**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. 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 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.

## 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 |
|---|---|---|---|---|---|
| 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 | N/A | N/A | N/A | 1708897BUN | 1708891BUN |

## Related Products

**Reagents for Real-Time qPCR**

| Catalog # | Description | Catalog # | Description |
|---|---|---|---|
| 1725270 | SsoAdvanced™ Universal SYBR® Green Supermix | 1725130 | iTaq Universal Probes Supermix |
| 1725280 | SsoAdvanced Universal Probes Supermix | 1725160 | SsoAdvanced PreAmp Supermix |
| 1725120 | iTaq™ Universal SYBR® Green Supermix | | |



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