



## All-In-One 5X RT MasterMix with gDNA Removal

### Cat. No. G592

Store at -20°C.

### Product Description

**All-In-One 5X RT MasterMix** is a convenient and ready-to-use formulation for first-strand cDNA synthesis, including genomic DNA (gDNA) removal. **Genomic DNA contamination is a common problem for accurate RNA detection and this MasterMix solves that problem without affecting reverse transcription and first-strand cDNA synthesis.** cDNA synthesis will be simple, reliable, and reproducible. The optimized 5X RT MasterMix contains **abm's** proprietary RScript Hot Reverse Transcriptase, RNaseOFF Ribonuclease Inhibitor, temperature-sensitive DNase, dNTPs, and a finely-balanced ratio of Oligo (dT)s and Random Primers. The high-quality cDNA synthesized from this kit can be used for a wide range of downstream applications.

Product Component	Quantity	Part No.
All-In-One 5X RT MasterMix	100 rxn (400 µl)	P592-1
Nuclease-Free H <sub>2</sub> O	1.0 ml	P100

### Protocol

1. Thoroughly thaw and mix individual components before use, and assemble reaction on ice.

Component	Volume
All-In-One 5X RT MasterMix	4 µl
Total RNA or poly(A) + mRNA	Variable (1 ng - 2 µg/rxn)
Nuclease-free H <sub>2</sub> O	up to 20 µl

2. Gently mix the reaction and briefly centrifuge.
3. Incubate the mixture at 37°C for 15 minutes, followed by 60°C for 10 minutes.
4. Optional: Stop the reaction by heating at 95°C for 3 minutes. Chill on ice. The newly synthesized first-strand cDNA is ready for immediate downstream applications, or for long-term storage at -20°C.

### General Notes

- Both poly(A) + mRNA and total RNA can be used for first-strand cDNA synthesis, but poly(A) + mRNA may give higher yields and improved purity of final products.
- For more efficient gDNA removal, increase the length of the 37°C incubation from recommended 15 minutes to 30 minutes.
- For longer transcripts, incubate the mixture at 60°C for up to 30 minutes.
- For applications using pure RNA where genomic DNA removal is not required, try our RScript Hot 5X RT MasterMix (Cat. No. **G590EU**) for a faster protocol for an even more efficient cDNA synthesis.