Lucigen®
Simplifying Genomics

# MessageBOOSTER™ cDNA Synthesis Kits

Do more with less - Produce cDNA from precious total RNA or cells

epicentre®
Exclusively available thru Lucigen.

- **Fast:** Amplify RNA and produce cDNA in only 1 day
- **Unbiased Amplification:** Preserves the relative transcript abundance of a sample with a high fidelity, linear RNA amplification process
- **Increased Sample Usability:** Use samples you couldn't before, produce enough cDNA for multiple assays, and have enough left over for archiving
- **Sensitive:** Readily and reproducibly detect even low-abundance transcripts in RNA from a single cell or 10 pg of total RNA (CT values <35 cycles)

The MessageBOOSTER™ cDNA Synthesis for qPCR (Cat. No. MB060124) and the MessageBOOSTER™ cDNA Synthesis from Cells Lysates Kit (Cat. No. MBCL90310) enable users to perform sensitive qPCR assays using either limiting amounts of total RNA (as low as 10 pg) or from 1 to 500 cells, respectively.

The kits amplify the mRNA contained in small total RNA/cell samples and then converts the amplified RNA to cDNA that is ready for PCR or qPCR (Figure 1). The MessageBOOSTER cDNA Synthesis Kits both use oligo(dT) to prime cDNA synthesis, and as a result is best used with intact total RNA samples or cell samples.

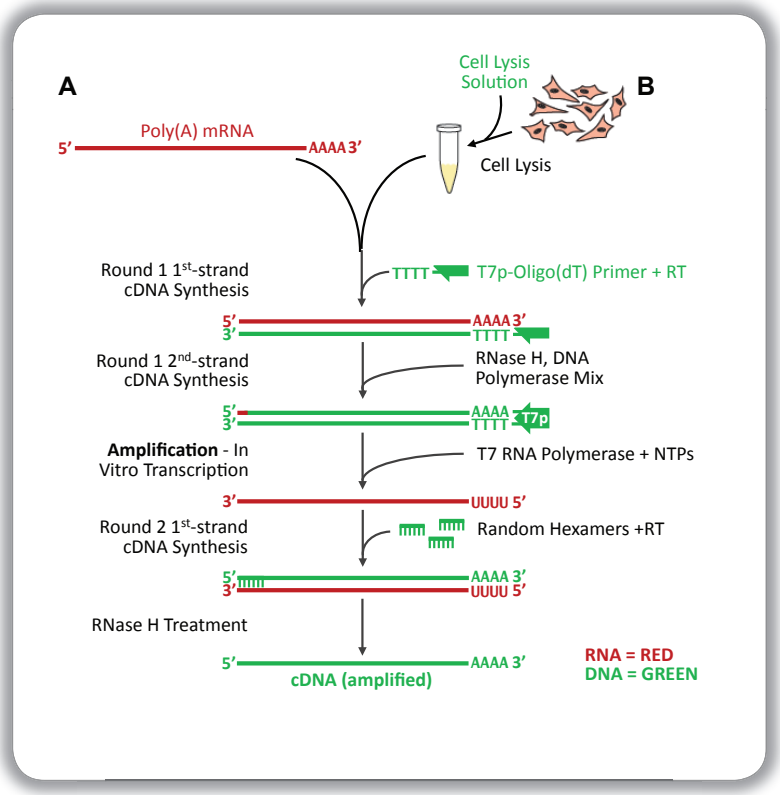


**Figure 1. Protocol overview of the MessageBOOSTER™ cDNA Synthesis Kits.** Each MessageBOOSTER kit reaction amplifies the poly(A) RNA (mRNA) directly from either (A) purified total RNA or (B) crude cell lysates. The amplified RNA is then reverse-transcribed to cDNA that can be diluted up to 1,000-fold for qPCR.

## Make Enough cDNA from Limiting Samples for Many qPCR Assays

| Total RNA Amount or Cell Number Inputs | Number of qPCR Assays Possible | |
|---|---|---|
| | Low[a] to Medium[b] Abundance Transcripts | Medium[b] to High[c] Abundance Transcripts |
| 10 pg (~1 cell) | ≥10 | ≥100 |
| 100 pg (~10 cells) | ≥100 | ≥1,000 |
| 500 pg (~50 cells) | ≥500 – 1,000 | ≥5,000 – 10,000 |

**Table 1. The number of qPCR assays that can be performed using cDNA produced by the MessageBOOSTER™ cDNA Synthesis Kits.** The number of qPCR assays is dependent on the amount of total RNA used in each MessageBOOSTER reaction and the abundance of the target transcript(s). Similar numbers of assays are possible using the MessageBOOSTER cDNA Synthesis from Cell Lysates Kit and the indicated number of cells.

[a] Low Abundance Transcripts = 1-1,000 copies per cell

[b] Medium Abundance Transcripts = 1,000-10,000 copies per cell

[c] High Abundance Transcripts = 10,000-100,000 copies per cell

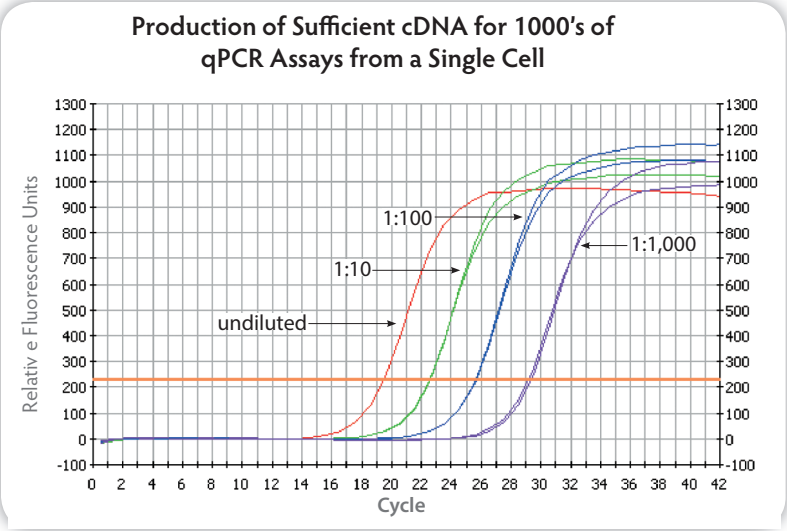


**Figure 2. qPCR results from cDNA produced from a single NRK cell.** cDNA was made from a single NRK cell using the MessageBOOSTER™ cDNA Synthesis from Cell Lysates Kit and qPCR of the PBGD target was performed using undiluted (red), 1:10 diluted (green), 1:100 diluted (blue), and 1:1,000 diluted (purple) aliquots. The low-abundance PBGD transcript was readily detected.

| Products | Size | Cat. No. |
|---|---|---|
| MessageBOOSTER™ cDNA Synthesis for qPCR | 24 rxns | 75927-956 |
| MessageBOOSTER™ cDNA Synthesis from Cell Lysates Kit | 10 rxns | 75927-958 |

COMPONENTS

Both kits contain: MessageBOOSTER™ T7-Oligo(dT) Primer, RNase Inhibitor, MessageBOOSTER™ Reverse Transcription PreMix, MessageBOOSTER™ DNA Polymerase PreMix, MessageBOOSTER™ DNA Polymerase, MessageBOOSTER™ cDNA Finishing Solution, MessageBOOSTER™ Random Primers, MessageBOOSTER™ RNase H, MMLV Reverse Transcriptase, MessageBOOSTER™ In Vitro Transcription PreMix, MessageBOOSTER™ T7 RNA Polymerase, MessageBOOSTER™ T7 Transcription Buffer, RNase-Free DNase I, Forward and Reverse Control PCR Primers, DTT, RNase-Free Water, Poly(I), NRK Total RNA Control.

The MessageBOOSTER cDNA Synthesis from Cell Lysates Kit also contains: QuickExtract™ RNA Extraction Solution, Primer Mix, and Positive Control.

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