• **Efficient:** high-target affinity, coupled with a novel TransAmp buffer system for improved yield of full-length cDNA

• **Unbiased:** optimized mix of random hexamers and anchored oligo dT primers for complete 5' to 3' RNA sequence representation

• **Sensitive:** lower Ct values from a broad range of input cDNA concentrations, enabling accurate detection of very low-copy targets

• **Robust:** reliable reverse transcription under challenging conditions, including the use of complex templates and in the presence of inhibitors

• **Fast:** high-yield reverse transcription from a broad range of targets in as little as 5 minutes

To complement the SensiFAST™ Probe and SYBR® qPCR Kits, Bioline has developed the SensiFAST cDNA Synthesis Kit which displays excellent linearity across a wide range of starting materials. This gives the same relative representation in cDNA templates, regardless of gene abundance, making it excellent for use in qPCR studies.

SensiFAST cDNA Synthesis Kit contains a highly-pure reverse transcriptase and optimized TransAmp™ buffer system, which includes a unique blend of random hexamers and anchored oligo(dT) primers to deliver the highest quality qPCR ready cDNA.

**APPLICATIONS**

SensiFAST cDNA synthesis kit is ideal for various qPCR applications including:

- Gene expression analysis
- Tissue biopsy analysis
- miRNA profiling / quantification
- RNA target detection
- Pathogen detection

**HIGH SENSITIVITY**

SensiFAST cDNA Synthesis Kit has been developed to provide a rapid and sensitive method for first-strand cDNA synthesis for use in qPCR studies (Fig. 1). SensiFAST cDNA Synthesis Kit is ideal for working with limited sample volumes, such as laser-micro dissected samples and tissue biopsies (down to 1 pg of input RNA), to reverse transcribe precious RNA into stable cDNA ready for accurate real-time quantification.

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**Fig. 1 Speed and sensitivity**

SensiFAST cDNA Synthesis Kit, a kit from supplier Q (A) and supplier B (B) were used in first-strand cDNA synthesis reactions of total RNA, following the recommended reaction conditions. A 10-fold serial dilution of the cDNA was then used in qPCR reactions, using SensiFAST SYBR. The results illustrate that SensiFAST cDNA Synthesis Kit (red) is both faster and more sensitive than both supplier Q and supplier B (blue), as judged by the earlier Ct values and improved uniformity between standard curves of decreasing amounts of input RNA.

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bioline.com/sensifast
REPRODUCIBILITY
A novel, highly-pure reverse transcriptase and TransAmp buffer system delivers both highly efficient first strand synthesis and higher cDNA yields. This leads to enhanced reproducibility (Fig. 2) and data accuracy. SensiFAST cDNA Synthesis Kit also displays excellent linearity across a wide range of starting material, giving the same relative target representation regardless of input cDNA concentration.

UNBIASED COVERAGE
To ensure unbiased 3’ and 5’ coverage and reverse transcription of all regions in RNA transcripts (Fig. 3), the TransAmp Buffer employs a unique blend of random hexamers and anchored oligo dT primers.

SPEED
SensiFAST cDNA Synthesis Kit can be used with SensiFAST Probe and SensiFAST SYBR® qPCR Kits for fast real-time RT-qPCR without compromising on quality (Fig. 4), giving real-time results in less than an hour.

“Reproducibility, sensitivity and cost-effectiveness, combined with a convenient two reagent system continues to make the SensiFAST cDNA Synthesis Kit stand out from its competitors and our preference for almost two years!”

Martin Sadowski, Queensland University of Technology, Brisbane, AU

For related products such as RNA isolation kits, qPCR kits and the Mic Personal qPCR Cycler visit www.bioline.com