



SensiFAST™ Probe Kits

Superior Fast Gene Expression Analysis

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Two-Step qPCR Kits

In two-step RT-qPCR, reverse transcription and PCR are performed as two separate reactions, allowing the cDNA and qPCR reactions to be optimized separately, resulting in higher yields of cDNA during the RT step than for one-step procedures, making it more sensitive than one step RT-qPCR. RNA is converted into cDNA in the first step, using a choice of random hexamers, oligo d(T)_n primers, or gene-specific primers, or for unbiased reverse transcription a mixture of random hexamer and anchored oligo d(T)_n (Such as in the SensiFAST cDNA Synthesis Kit). Either a portion of the RT reaction is diluted into the qPCR in the second step, or the RT reaction is diluted into the qPCR in the second step, or the RT reaction can be extracted and precipitated prior to use, allowing control over the amount of cDNA input. This flexibility is useful when working with genes of variable abundance or on challenging sequences. Any residual DNA cDNA is also available for future amplification reactions of other genes, or even for other applications. The two-step method is particularly useful when the goal is to detect multiple targets from a single sample, or to perform multiple PCR amplifications from a single sample.

- **Reproducible:** consistent results between technical replicates for increased confidence in results
- **Specific:** antibody-mediated hot-start DNA polymerase minimizes non-specific amplification for improved assay sensitivity and reliability
- **Sensitive:** reliable quantification of low abundance targets and scarce samples
- **Robust:** accurate detection of DNA and RNA targets from a broad range of sample types
- **Fast:** delivers reproducible, accurate assay results in as little as 30 minutes

Table 1 Applications for SensiFAST™ kits

Biomarker discovery and validation	Cancer risk assessment	Cellular mRNA and miRNA
ChIP	Detection of extremely low copy targets	DNA damage measurement
Drug therapy efficacy	Gene dosage determination	Gene expression analysis
Gene knockdown validation	Genotyping, allelic discrimination, SNP, haplotyping	High-throughput qPCR
Microarray validation	Microbial quantification	Mitochondrial DNA studies
Pathogen detection	Quantification	Viral load

The SensiFAST Probe Kit has been developed for fast qPCR and is designed for superior sensitivity and specificity with probe-detection technology, including TaqMan®, Scorpions® and molecular beacon probes. SensiFAST Probe Kit has been optimized for fast mode on fast qPCR instruments. A combination of the latest advances in buffer chemistry and PCR enhancers, with antibodies for the hot-start DNA polymerase system, ensures that the SensiFAST Probe Kit delivers shorter run times, is highly reproducible, highly-specific and ultra-sensitive (Fig. 1). The advanced buffer chemistry and enhancers also make SensiFAST Probe perfect for multiplexing (Fig. 2), allowing more samples to be run in a day with the highest confidence, ideal for high-throughput assays.

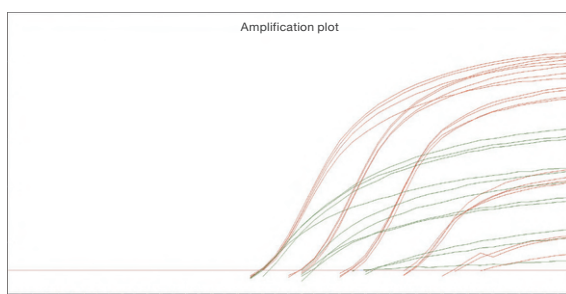


Fig. 1 Sensitivity and reproducibility

Comparison of sensitivity and reproducibility of SensiFAST Probe (red) and a Kit from supplier I (green), the process used a 10-fold serial dilution of human DNA (in quadruplicate) over several orders of magnitude. The results illustrate that SensiFAST Probe is far more sensitive than supplier I.

“With SensiFAST I was able to dramatically boost my efficiencies and increase reproducibility. In addition, I found that multiple primer pairs produced cleaner products with improved melting curves.”

UC Davis School of Veterinary Medicine, USA

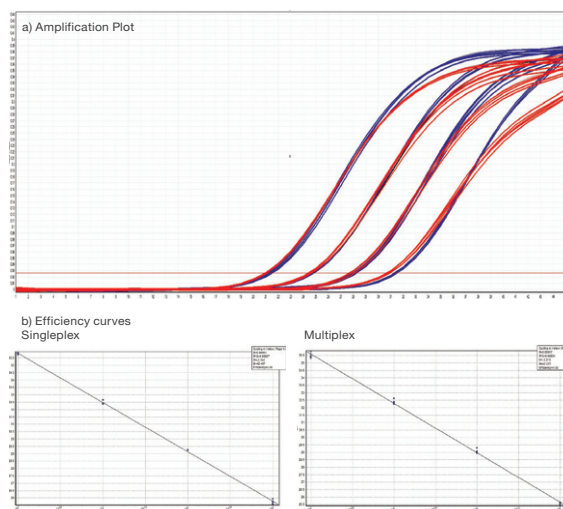


Fig. 2 Sensitivity and efficiency in multiplexing

A 10-fold serial dilution of human cDNA amplified with four different probes; both in singleplex reactions (blue line) and quadruplex reaction (the red line displayed is for the same primers as for the singleplex). Five replicates were run using a conventional TaqMan primer/probe set under fast cycling conditions. SensiFAST Probe No-ROX Kit illustrates a) exactly the same high sensitivity, excellent reproducibility and Ct values for both the singleplex and multiplex reactions and b) no reduction of efficiency that is commonly associated with multiplexing.

Product	Size	Cat. #
SensiFAST Probe No-ROX Kit	500 Reactions	BIO-86005
	2000 Reactions	BIO-86020
	5000 Reactions	BIO-86050
SensiFAST Probe Lo-ROX Kit	500 Reactions	BIO-84005
	2000 Reactions	BIO-84020
	5000 Reactions	BIO-84050
SensiFAST Probe Hi-ROX Kit	500 Reactions	BIO-82005
	2000 Reactions	BIO-82020

SensiFAST Selection Table

Manufacturer	Model	Lo-ROX	Hi-ROX	No-ROX	HRM Compatible
Agilent (Stratagene)	AriaMX	Yes			Yes
	MX3000P™, MX3005P™, MX4000P™	Yes			Yes
Analytika Jena	qTower, qTower 2.x			Yes	
Applied Biosystems™	7000		Yes		
	7300		Yes		
	7500	Yes			
	7500 FAST	Yes			Yes
	7700		Yes		
	7900		Yes		
	7900 HT		Yes		
	7900HT FAST	Yes			Yes
	Quantstudio™ 3,5,6,7, 12k flex	Yes			Yes
	StepOne™		Yes		Yes
	StepOne™ Plus		Yes		Yes
	Via7™	Yes			Yes
Bio-Rad®	CFX96™			Yes	Yes
	CFX384™			Yes	Yes
	Chromo4™			Yes	
	iCycler®	Yes			
	iQ™5			Yes	
	MiniOpticon™			Yes	
	MyiQ™			Yes	
	Opticon™			Yes	
	Opticon™2			Yes	
BJS	Xpress®			Yes	
BMS	MIC			Yes	Yes
Cepheid®	SmartCycler®			Yes	
Eppendorf	Mastercycler® ep realplex			Yes	Yes
	Mastercycler® ep realplex 2S			Yes	Yes
Fluidigm	BioMark™	Yes			
IT-IS Life Science	MyGo Pro			Yes	Yes
PCRmax	Eco™			Yes	Yes
Qiagen	Rotor-Gene™ 3000			Yes	
	Rotor-Gene™ 6000			Yes	Yes
	Rotor-Gene™ Q			Yes	Yes
Roche	Lightcycler®96			Yes	Yes
	Lightcycler®480			Yes	Yes
	Lightcycler®Nano			Yes	Yes
Takara	Thermal Cycler Dice®			Yes	
Techne	PrimeQ			Yes	
	Quantica®			Yes	
Thermo	Piko Real™			Yes	

Nous contacter

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