



Experience the success
with Bioline qPCR Kits at

**50%
OFF**

SensiFAST™ Real-Time PCR Kits

makes all the difference between a successful and unsuccessful experiment.

Fast . Sensitive . Reproducible

- delivers reproducible, accurate assay results in as little as 30 minutes
- reliable quantification of low abundance targets and scarce samples
- consistent results between technical replicates for increased confidence in results

Product	Size	Cat. #
SensiFAST SYBR Hi-ROX Kit	500 rxns	BIO-92005
SensiFAST SYBR Lo-ROX Kit	500 rxns	BIO-94005
SensiFAST SYBR No-ROX Kit	500 rxns	BIO-98005
SensiFAST SYBR & Fluorescein Kit	500 rxns	BIO-96005
SensiFAST Probe Hi-ROX Kit	500 rxns	BIO-82005
SensiFAST Probe Lo-ROX Kit	500 rxns	BIO-84005
SensiFAST Probe No-ROX Kit	500 rxns	BIO-86005
SensiFAST HRM Kit	500 rxns	BIO-32005

SensiFAST Selection Table

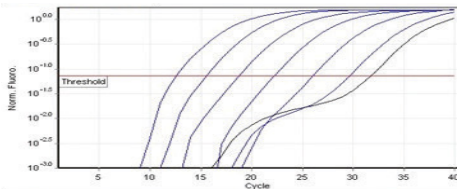
Manufacturer	Model	Lo-ROX	Hi-ROX	No-ROX	HRM Compatible
Agilent (Stratagene)	AriaMX	Yes			Yes
	MX3000P™, MX3005P™, MX4000P™	Yes			Yes
Analytika Jena	qTower, qTower 2.x			Yes	
Applied Biosystems™	7000		Yes		
	7300		Yes		
	7500	Yes			
	7500 FAST	Yes			Yes
	7700		Yes		
	7900		Yes		
	7900 HT		Yes		
	7900HT FAST	Yes			Yes
	Quantstudio™ 3,5,6,7, 12k flex	Yes			Yes
	StepOne™		Yes		Yes
	StepOne™ Plus		Yes		Yes
	Vii7™	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	

The SensiFAST SYBR® Kit has been developed for fast highly sensitive and reproducible qPCR and has been validated on commonly used in qPCR instruments.

The use of antibodies for the hot-start DNA polymerase system reduces the chances of primer-dimer formation, reducing non-specific priming and leading to greater sensitivity (Fig. 1). The addition of the latest advances in buffer chemistry and enhancers also ensures that the SensiFAST SYBR® Kit produces faster (under 30 minutes), highly reproducible (Fig. 2) qPCR results.

In contrast to specific probes that must be synthesized for each target, SYBR® Green can be used directly in the PCR, making it more convenient and less expensive than probes, however SYBR will detect all double-stranded DNA preventing its use in multiplexing.

a) Amplification plot



b) Standard curve

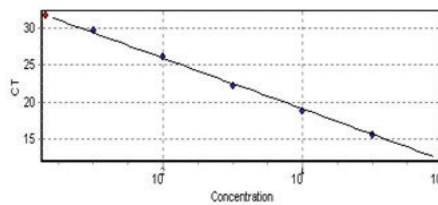


Fig. 1 High sensitivity qPCR under fast cycling conditions.

SensiFAST SYBR No-ROX Kit was used to amplify the rat dopamine 4 receptor using fast cycling conditions (customer results). The process used a 10-fold serial dilution rat DNA (in triplicate) over 7 orders of magnitude. The results illustrate a) very good linearity, down to 10 copies, b) very good correlation coefficient ($r^2 = 0.998$) qPCR reaction efficiency (95%) and c) a single band on an agarose gel (data not shown).

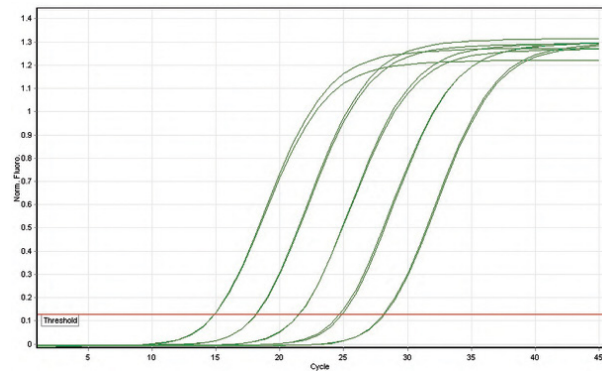


Fig. 2 Reproducibility under fast cycling conditions

The PGK gene diluted in a 10-fold serial dilution of mouse cDNA (in triplicate) over 5 orders of magnitude and amplified using SensiFAST SYBR No-ROX under fast cycling conditions. The results illustrate that the SensiFAST SYBR is fast, highly reproducible and sensitive.

"I have been using a Biorline's qPCR mix (SensiFAST SYBR No-ROX, BIO-98020) for four years with Arabidopsis cDNA on a Bio-Rad CFX-96 and a Roche LightCycler-96 in 15 or 20 ul reaction volumes. I can highlight excellent technical replication, low baseline noise and good signal/noise ratio. Reasonable price quotations allow me also to stretch my budget. I know then that with an appropriate experimental design I can trust my results and expect them on time!"

R. Alvarez, University of Essex, UK

"Very good linearity right down to 10 copies, very good correlation coefficient, good qPCR reaction efficiency and gave a single band on an agarose gel."

King's College London, UK

Product	Size	Cat. #
SensiFAST SYBR No-ROX Kit	500 Reactions	BIO-98005
	2000 Reactions	BIO-98020
	5000 Reactions	BIO-98050
SensiFAST SYBR Lo-ROX Kit	500 Reactions	BIO-94005
	2000 Reactions	BIO-94020
	5000 Reactions	BIO-94050
SensiFAST SYBR Hi-ROX Kit	500 Reactions	BIO-92005
	2000 Reactions	BIO-92020

SensiFAST™ cDNA Synthesis Kit

- **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, Biorline 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.

A novel, highly-pure reverse transcriptase and TransAmp buffer system delivers both highly efficient first strand synthesis (Fig. 1) 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.

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. Additionally, the SensiFAST cDNA Synthesis Kit can be used with SensiFAST Probe and SYBR Kits for fast qPCR to produce high-quality results in less than 1 hour.

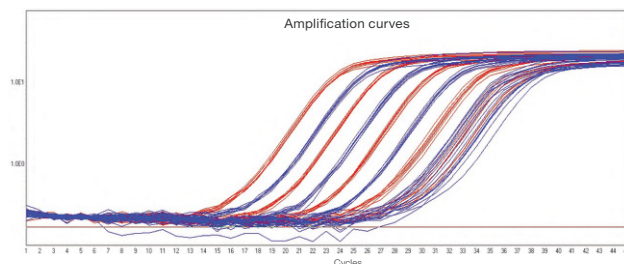


Fig. 1 Speed and sensitivity
SensiFAST cDNA synthesis Kit and a kit from supplier B were used in a first-strand reaction of the same source of total RNA using the manufacturers' recommended conditions. A 10-fold serial dilution was used in a qPCR reaction. The results illustrate that the SensiFAST cDNA Synthesis Kit (red) is also much faster and even more sensitive than supplier B (blue).

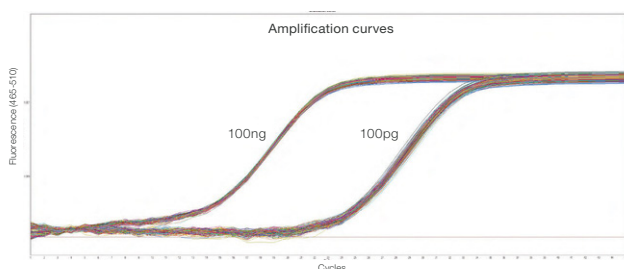


Fig. 2 High reproducibility
SensiFAST cDNA synthesis Kit was employed in 48 independent first-strand reactions, containing 100 ng or 100 pg of total RNA. The first-strand products from the high and input RNA were used in a qPCR assay (reactions performed in triplicate). The results demonstrate the excellent reproducibility of the SensiFAST cDNA Synthesis Kit (the same Ct values), across all 144 wells with 100 ng of input target RNA and all 144 wells with 100 pg of input target RNA

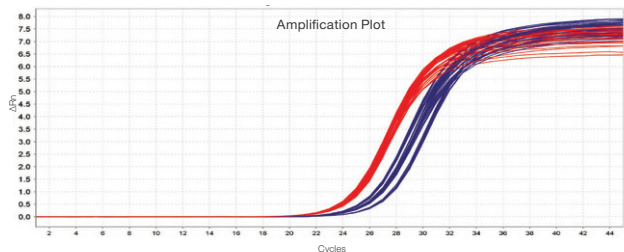


Fig. 3 Unbiased representation across target genes
SensiFAST cDNA Synthesis Kit and a kit from supplier B were used in a first-strand reaction containing total RNA. Primer pairs were designed at 1 kb intervals across the same transcript and used in a qPCR reaction with SensiFAST SYBR® No-ROX. The results illustrate that unlike the results from supplier B (blue), SensiFAST cDNA Synthesis Kit (red) did not show any bias across the intervening transcript.

Product	Size	Cat. #
SensiFAST cDNA Synthesis Kit	50 Reactions	BIO-65053
	250 Reactions	BIO-65054