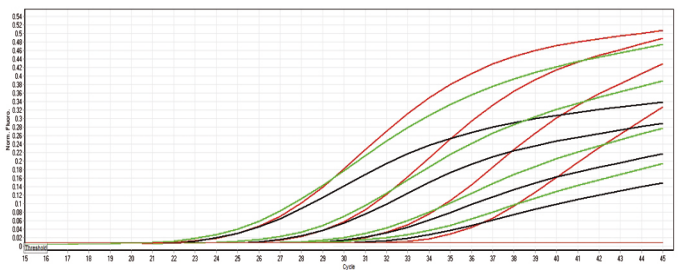


## SensiMix™ II Probe Kit

- **Unmatched sensitivity, earlier Ct detection**
- **Superior PCR Efficiency with sequence specific probes**
- **High specificity, reproducibility and reduced background**
- **Ideal for genotyping, multiplexing and gene expression analysis**
- **Compatibility with all real-time PCR instruments**

SensiMix II Probe is a second-generation 2x mastermix which has been formulated for superior sensitivity and accurate real-time PCR using sequence specific probe chemistries such as TaqMan. It uses the latest advances in enzyme chemistry to deliver superior performance in genotyping, gene expression analysis and multiplexing (Fig. 1). SensiMix II Probe generates highly reproducible and reliable data on all real-time PCR instruments.

SensiMix II Probe uses the hot-start properties of our highly engineered proprietary DNA polymerase, SensiTaq, giving high specificity and sensitivity and greatly reducing non-specific amplification, resulting from non-specific priming events during reaction setup and initiation and increases overall reaction efficiency. Even higher specificity is conferred by the requirement of three oligos to anneal to the DNA before any data is collected in the probe assay (rather than two oligos for a SYBR™ assays), this is further enhanced with the use of our new buffer formulation which has been designed to increase probe and primers specific binding, leading to reduced background, earlier cycle times (Cts) (Fig. 2) and better allelic discrimination.



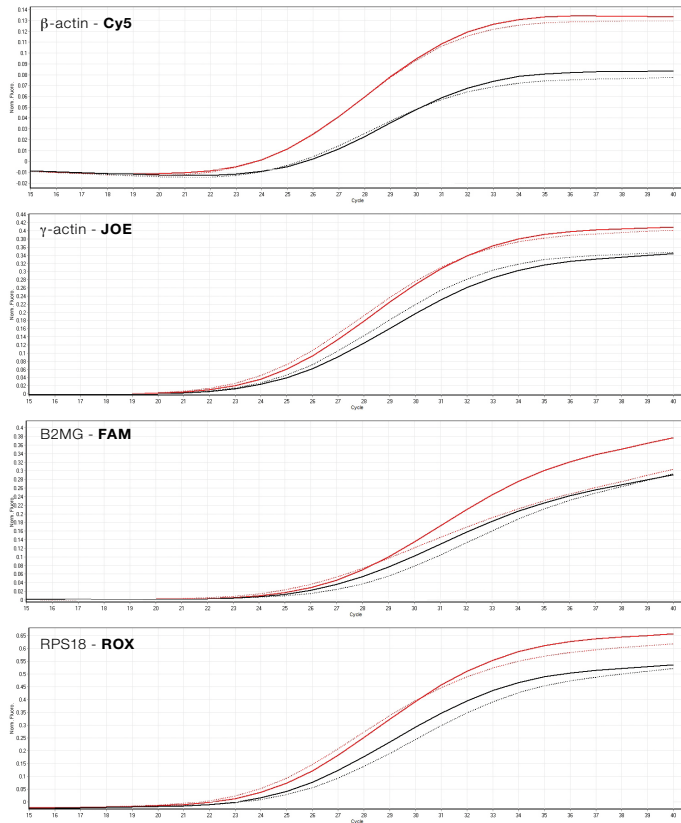
**Fig. 1. Comparison of SensiMix II Probe (red line) and other commercially available kits.** The B2MG gene was amplified in triplicate (averages shown) using a conventional TaqMan primer/probe set and standard cycling conditions (40 cycles 95°C 10s, 60°C 60s), on a Corbett Rotor-Gene 6000, from 10-fold serial dilution of cDNA. SensiMix II (red) was more consistent (efficiency of 99%), higher signal and greater sensitivity than main competitors in the market, competitor B (green) (efficiency of 90%) and competitor T (black) (efficiency of 106%).

# SensiMix™ II Probe Kit

SensiMix II Probe Kit is designed for superior sensitivity and specificity on all real-time instruments, giving much higher efficiency with probe-detection technology, including TaqMan®, Scorpion®, Assay On Demand®, allelic discrimination (Fig. 3) and molecular beacon probes.

Because SensiMix II Probe has been specially developed for challenging multiplex PCR applications, there is little or no need for you to adjust reaction and cycling conditions, simply add your primer/probe sets and DNA template then start the reaction on any cycler capable of multicolor detection (Fig. 4).

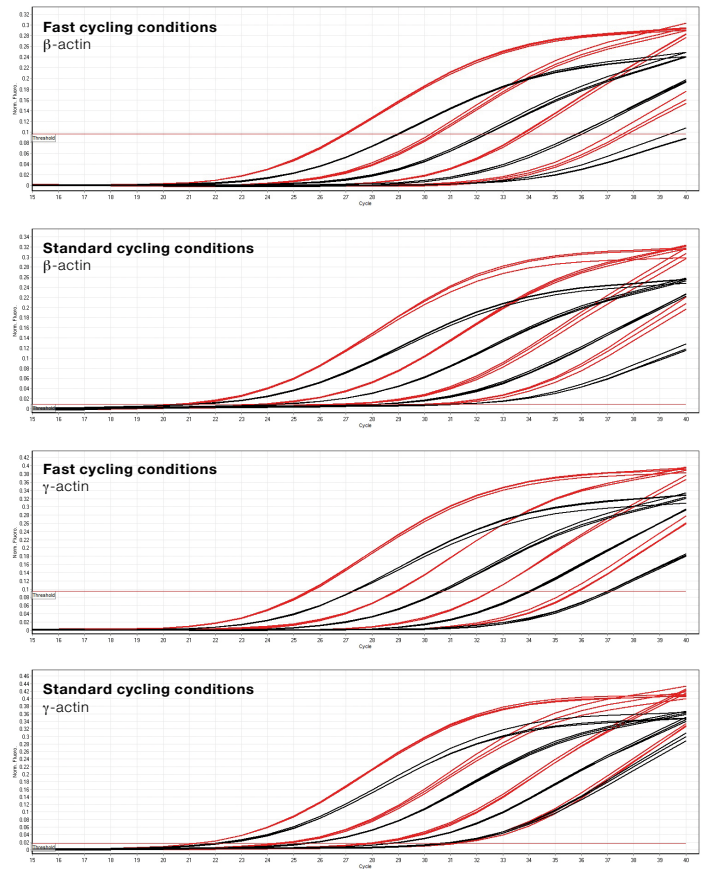
SensiMix II Probe Kit also contains a separate vial of ROX™, a passive reference dye, to maximize performance on instruments that can acquire a ROX fluorescent signal.



**Fig. 4. Comparison of SensiMix II Probe (red line) and competitor Q in a quadruplex reaction.** A 100 fold dilution of human cDNA was used with four different probes either in singleplex reactions (solid line) or a quadruplex reaction (dashed line) using a conventional TaqMan primer/probe set and standard cycling conditions (40 cycles 95°C 10s, 60°C 60s), on a Corbett Rotor-Gene 6000. The seven replicates are shown averaged. SensiMix II Probe (red) has consistently earlier Cts than competitor Q (black) (1-2 Cts earlier) and higher signal with all four genes.

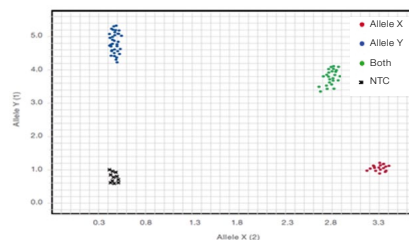
**Note:**

SensiMix™ (Bioline Reagents Ltd.), SYBR® (Molecular Probes), ROX™ (Applied Biosystems), TaqMan®, Assay On Demand® (ABI), Corbett RotorGene™ (Qiagen), Scorpion® (DxS).



**Fig. 2. Comparison of SensiMix II Probe (red line) and competitor Q using standard and fast cycling conditions.**

Human  $\beta$ -actin and  $\gamma$ -actin genes were amplified in triplicate using a conventional primer/probe set with a FAM labeled probe according to each manufacturer's protocol, from 10-fold serial dilution of cDNA with either SensiMix II Probe (red), or a leading competitor mix Q (black). With fast cycling conditions (40 cycles 95°C 10s, 60°C 10s) SensiMix II Probe showed earlier Cts (1-2 Cts) for both genes and higher signal and greater sensitivity. With standard cycling conditions (40 cycles 95°C 10s, 60°C 60s) competitor Q results were better, however SensiMix II was more consistent, still showing earlier Cts (1-1.5 Cts) and higher signal.



**Fig. 3. Allelic discrimination plot of human genomic DNA samples.**

A total of 75 human genomic DNA samples and 11 no-template controls were accurately genotyped using an ABI 7900HT platform, and ABI sequence detection software (95% confidence level). Reactions were performed in 5 $\mu$ l volumes with SensiMix II Probe, 10ng human genomic DNA, 200nM primers and 200nM of each probe.

## Ordering Information

PRODUCT	PACK SIZE	CAT NO.
SensiMix II Probe Kit	250 Reactions	BIO-91002
SensiMix II Probe Kit	500 Reactions	BIO-91005
SensiMix II Probe Kit	2000 Reactions	BIO-91020

PS0410V1

United Kingdom

Tel: +44 (0)20 8830 5300

USA

Toll Free: 888 257 5155

Germany

Tel: +49 (0)3371 681 229

Australia

Tel: +61 (0)2 9209 4180

www.bioline.com

