

PCR Tools

# USB® VeriQuest™ SYBR® Green qPCR Master Mix

**Applications:**

- Amplification from genomic DNA or cDNA input
- Gene expression validation

**Features:**

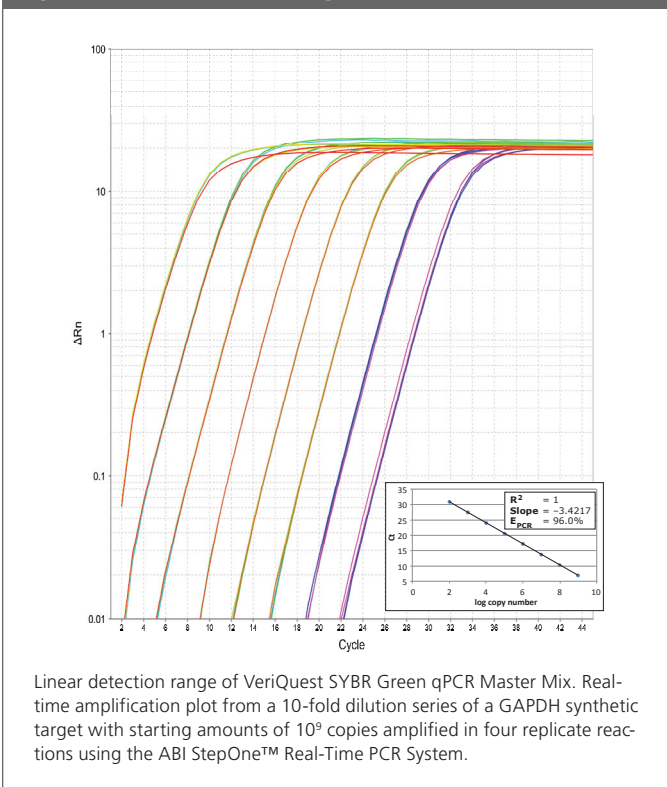
- One-tube master mix with ROX™ reference dye included
- Same protocols and same primers for standard mode amplification
- Consistency over a broad dynamic range: 7 orders of magnitude linear detection range with a correlation coefficient  $\approx 1$
- Exceptional performance with challenging AT-rich and GC-rich regions
- Detect less than 4 copies of target from genomic DNA and differentiate less than 2-fold differences
- Contains dUTP and uracil-DNA glycosylase for carryover contamination prevention
- Hot start PCR for room temperature reaction setup
- Stable at room temperature for 72 hours in a preassembled reaction

USB VeriQuest SYBR Green qPCR Master Mix is a ready-to-use mix for real-time quantitative PCR (qPCR) on all PCR instruments that use ROX as a Passive Reference Dye (Fig. 2), allowing an easy transition from your current qPCR supplier. It is formulated for SYBR Green I detection. The master mix contains a chemically modified Taq DNA Polymerase, MgCl<sub>2</sub>, ultrapure nucleotides with an optimized dUTP:dTTP ratio, uracil-DNA glycosylase (UDG), SYBR Green I, and ROX Passive Reference Dye in a proprietary reaction buffer. The proprietary reaction buffer and the hot start polymerase enhance SYBR Green-based qPCR amplification by reducing primer-dimer formation and non-template priming, increasing specificity and sensitivity. Simply add DNA template, primers, and water and the reactions are ready for cycling.

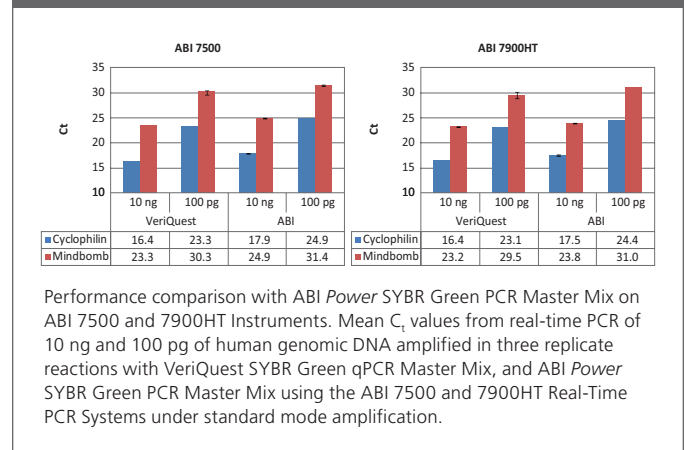
Even in high AT-rich or GC-rich regions, VeriQuest SYBR Green qPCR Master Mix offers exceptional performance and high specificity with challenging templates so you have the confidence to verify your gene expression results (Fig. 3).

USB VeriQuest SYBR Green qPCR Master Mix offers reproducible, consistent results while maintaining precision and efficiency. It provides the convenience of a master mix formulation without sacrificing quality. VeriQuest SYBR Green qPCR Master Mix provides consistency over a broad dynamic template concentration range allowing 7 orders of magnitude linear detection (Fig. 1). High precision in target quantification and discrimination of a 1.33 to 10-fold dilution series with VeriQuest SYBR Green qPCR Master Mix ensure accurate results (Fig. 4).

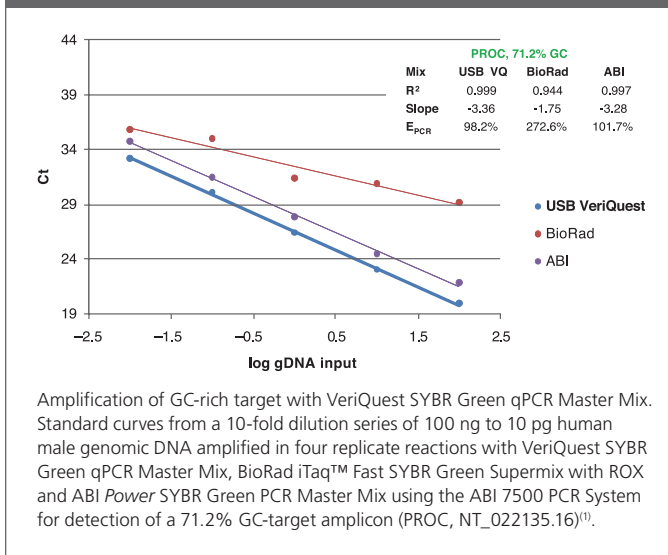
**Fig. 1. Linear detection range**



**Fig. 2. Performance comparison**



**Fig. 3. Amplification of GC-rich target**



VeriQuest SYBR Green qPCR Master Mix is highly stable and easy to work with. It remains stable at room temperature for 72 hours in a pre-assembled reaction and can be stored at 4°C for convenient handling, with no lost time waiting for your master mix to thaw. Testing of 10 freeze-thaw cycles showed no loss in master mix performance. It is ideal for high-throughput handling (Fig. 5).

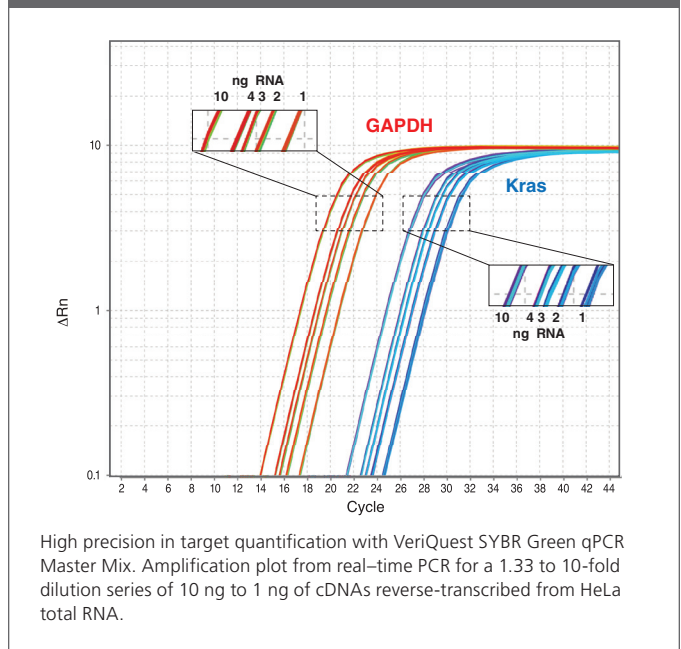
**VeriQuest SYBR Green qPCR Master Mix**

Product code	Pack size	
	(50 µl volume)	(20 µl volume)
75600	40 reactions	100 reactions
	200 reactions	500 reactions
	400 reactions	1,000 reactions
	1,000 reactions	2,500 reactions
	2,000 reactions	5,000 reactions

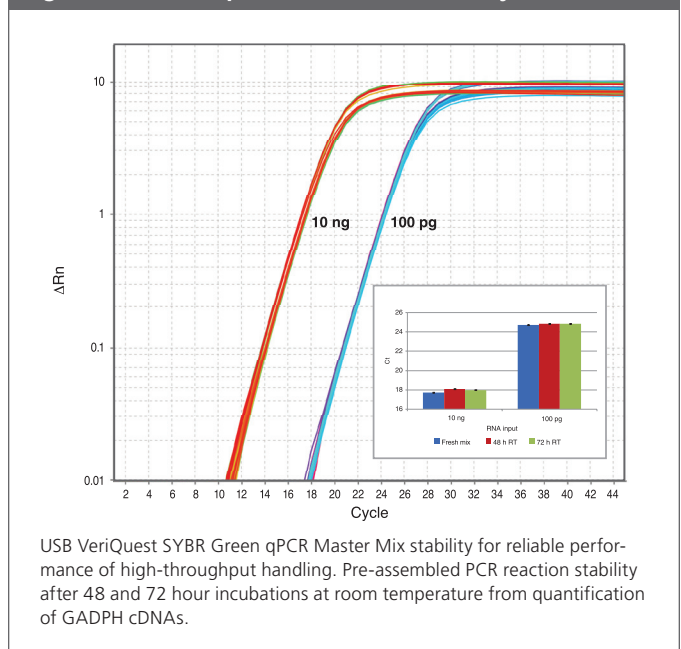
**References:**

1. Tewhey, R. et al. (2009) *Nature Biotechnology* **27**, 1025–1031.

**Fig. 4. High precision in target quantification**



**Fig. 5. VeriQuest qPCR Master Mix stability**



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