

## ENZYMES

# Realtime PCR Master Mix

CAT# QPK Range

### ► SPECIFICATION

|                               |   |
|-------------------------------|---|
| Concentration                 | 40 reactions/mL   |
| Functional Test*              | $-4.31 \leq \text{slope} \leq -2.99$ ; correlation factor ( $r^2$ ) $\geq 0.97$ |
| Bacterial DNA contamination** | Ct $\geq 30$  |

\*Amplification test using  $\beta$ -actin gene (295 bp). Performance on a regression analysis between copy numbers (1 logarithm) and Ct using serially diluted genomic DNA solutions.

\*\*Amplification test using 16S rDNA (411 bp). Blank sample analysis.

### ► PRODUCT FORMAT

| PART #  | DESCRIPTION                              | CONTENT/FORMAT  |
|---------|--|---|
| QPK-101 | Realtime PCR Master Mix Kit              | 5x 1mL Realtime PCR Master Mix (200 reactions)            |
| QPK-201 | Realtime PCR Master Mix Kit (SYBR Green) | 5x 1mL SYBR Green Realtime PCR Master Mix (200 reactions) |

Bulk format (100mL) also available.

### ► DESCRIPTION AND FEATURES

Realtime PCR Master Mix series is a Taq DNA polymerase-based 2x master mix for real-time PCR, which contains all components, except for the primer and probe. Realtime PCR Master Mix is applicable in TaqMan assays or hybridization probe assays, in combination with each probe. SYBR Green Realtime PCR Master Mix is applicable for intercalation assay with SYBR Green I. SYBR Green Realtime PCR Master Mix -Plus- is effective for reducing non-specific amplifications or primer dimers in the intercalation assay.

- Can be used in glass capillary systems (e.g. LightCycler, Roche Molecular Systems, Inc.).
- Can be used in a passive reference system (e.g. ABI PRISM 7000, 7300, 7700, 7900HT, StepOne Plus, Applied Biosystems, Inc.). The passive reference dye does not affect any other systems.
- Hot Start technology with anti-Taq DNA polymerase antibodies enables high specificity and reproducible amplification.
- Effective for reducing non-specific amplifications or primer dimers.

**SEKISUI**  
DIAGNOSTICS

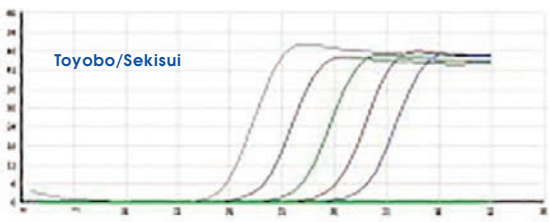
Because every result matters™

ENZYMES  
CAT# QPK Range

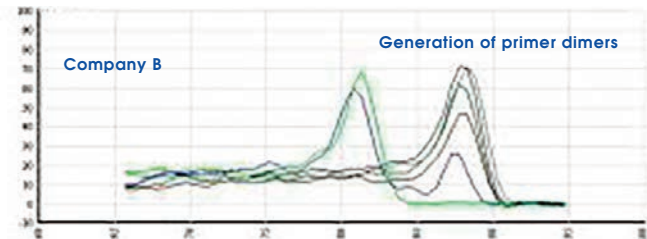
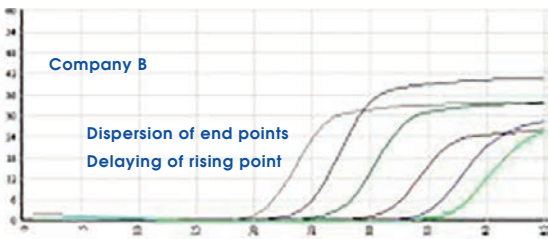
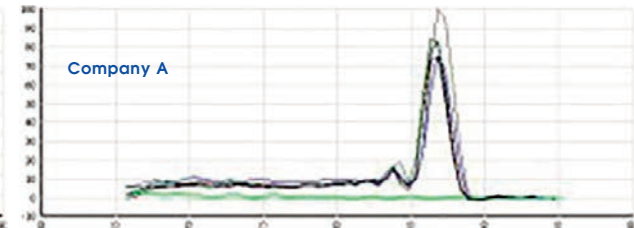
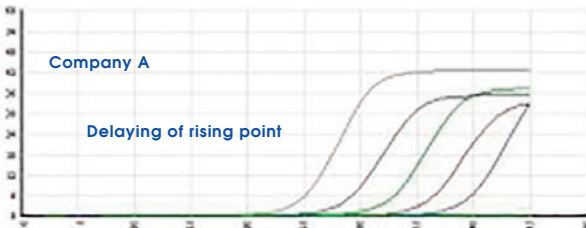
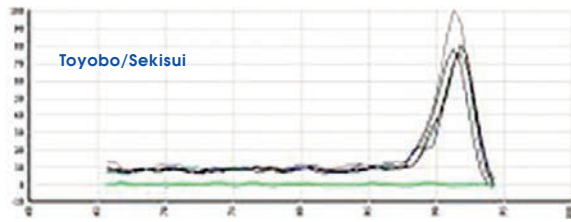
## CHARACTERISTICS

**Application Data:** Amplification of the b-actin gene was detected using serially diluted genomic DNA solutions (10n dilution; 30 ng-3 mg) with real-time PCR kits for the SYBR Green assay. SYBR Green Realtime PCR Master Mix showed **greater sensitivity and efficiency** than other kits (companies A and B). Moreover, SYBR Green Realtime PCR Master Mix generated **fewer primer dimers** than the other kits.

Amplification Curves



Melting Curves

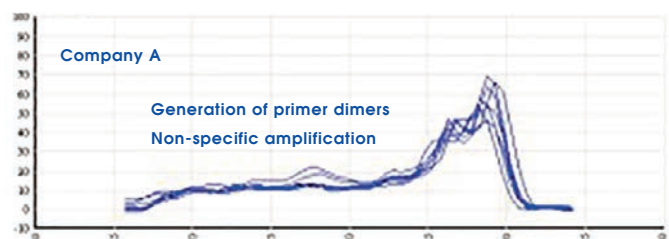
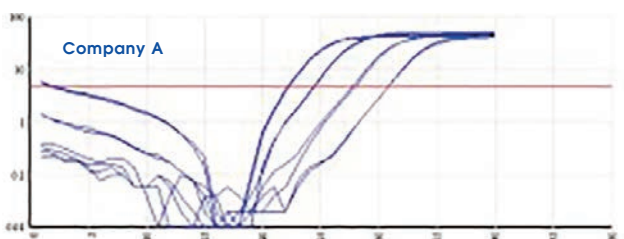
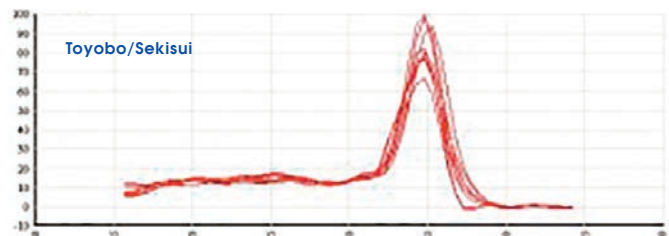


**Application Data:** Amplification of an 80-bp target gene was detected using serially diluted rodent genomic DNA (10n dilution; 0.01 ng-10 ng) with SYBR Green Realtime PCR kits. SYBR Green Realtime PCR Master Mix Plus showed **greater specificity and dynamic range** than the other kit (company A).

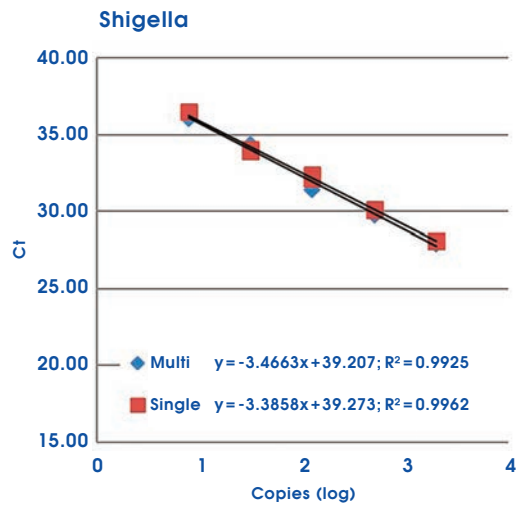
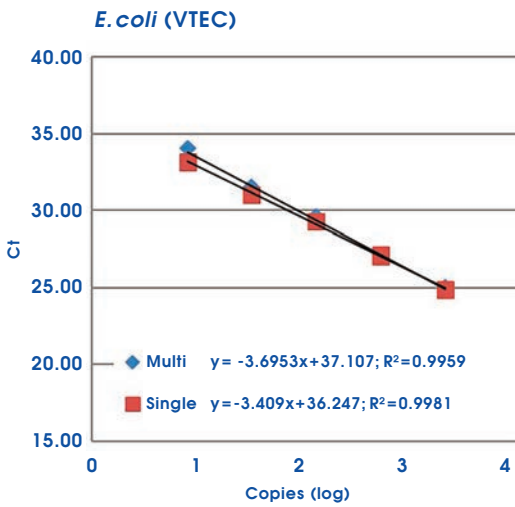
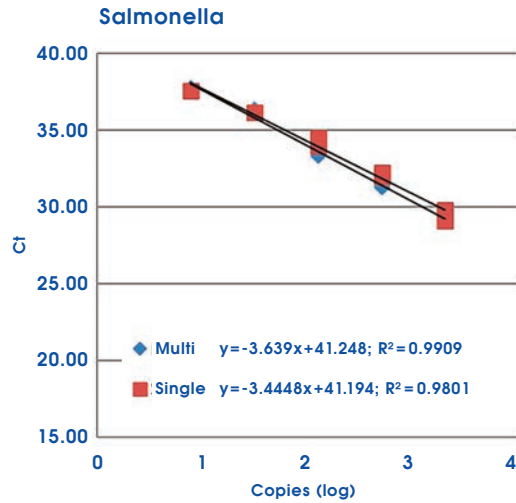
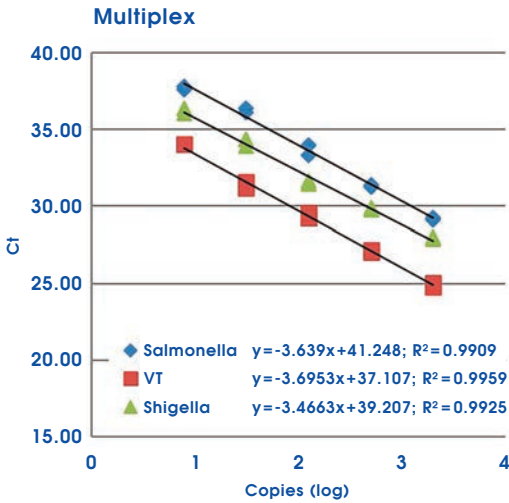
Amplification Curves



Melting Curves

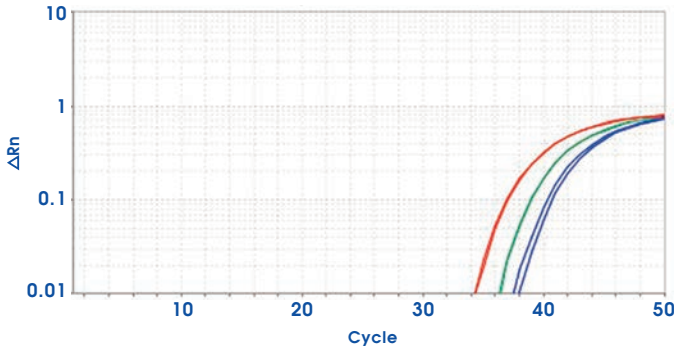


**Detection of Enteric Bacteria:** The target genes were detected from serially ( $4^n$ ) diluted purified DNA of Salmonella, Escherichia coli (VTEC) and Shigella cells by triplex detection systems with TaqMan probes labeled by different fluorescent dyes. No significant differences of PCR efficiency and correlation coefficient were observed between the triplex and singleplex systems.

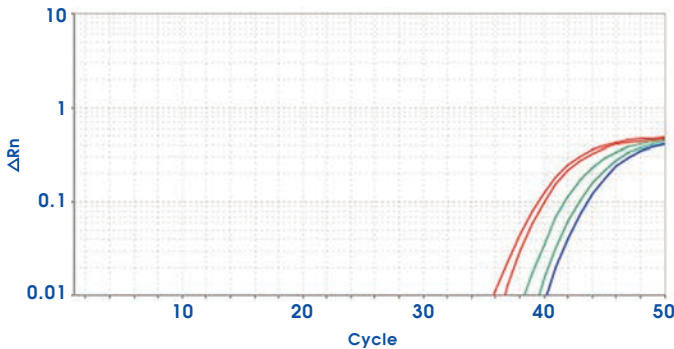


**Detection of papilloma virus (HPV):** The sensitivity and quantitativity of two master mix reagents were compared by detecting serially (3<sup>n</sup>) diluted HPV DNA using TaqMan probe. Realtime PCR Master Mix (TOYOBO) exhibited higher sensitivity and PCR efficiency.

**Toyobo/Sekisui Realtime PCR Master Mix**  
Amplification Plot



**ABI Gene Expression Master Mix**  
Amplification Plot



*Please inquire about customization options. Our experienced technical team can work with you to optimize mixes for your requirements.*

|            | TOYOBO/SEKISUI REALTIME PCR MASTER MIX | ABI GENE EXPRESSION MASTER MIX |
|------------|--|--------------------------------|
| 100 copies | 34.39, 34.23                           | 36.77, 35.91                   |
| 33 copies  | 36.27, 36.41                           | 38.40, 39.55                   |
| 11 copies  | 37.53, 37.99                           | 40.24, N/A                     |
| NTC        | N/A                                    | N/A                            |
| slope      | -3.612                                 | -4.292                         |
| efficiency | 89.2%                                  | 71.0%                          |
| r          | -0.990                                 | -0.940                         |

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