

# Real-Time RT-PCR Directly from Cell Lysates

TaqMan® Gene Expression Cells-to-C<sub>T</sub>™ Kit and TaqMan® Cells-to-C<sub>T</sub>™ Control Kit

**Complete solution**—Optimized workflow includes cell lysis reagents with gDNA removal, RT enzyme mix, buffer, and new TaqMan Gene Expression Master Mix

**Fast**—Perform RNA extraction including DNase treatment in as little as 7 minutes

**Flexible**—Lyse samples directly in tubes, or in 96- or 384-well culture plates, simplifying sample preparation

**Reliable**—Obtain real-time PCR results equivalent to those from purified RNA from as few as 10 cells

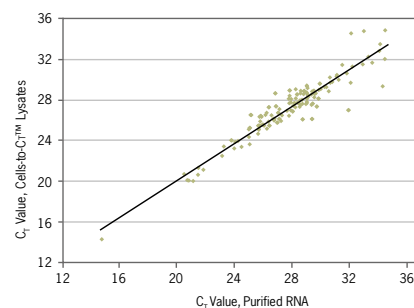
The new TaqMan Gene Expression Cells-to-C<sub>T</sub> Kit is an innovative approach to gene expression analysis starting from cultured mammalian cells. The kit includes reagents for cell lysis and genomic DNA removal directly in tubes or the 96- or 384-well culture plates in just 7 minutes at room temperature. The supplied reverse transcriptase enzyme and buffer, along with the new TaqMan Gene Expression Master Mix, can be used in conjunction with over 700,000 different user-supplied TaqMan Gene Expression

Assays. Lysates can be generated from 10 to 100,000 cells and provide the same sensitivity and specificity as purified RNA samples. All components of the TaqMan Gene Expression Cells-to-C<sub>T</sub> Kit have been optimized for consistent and reliable performance. This removes the guesswork involved in assembling separate sample preparation, reverse transcription, and real-time PCR reagents. The TaqMan Gene Expression Cells-to-C<sub>T</sub> Kit has been validated with more than 125 TaqMan Gene Expression Assays for added quality assurance.

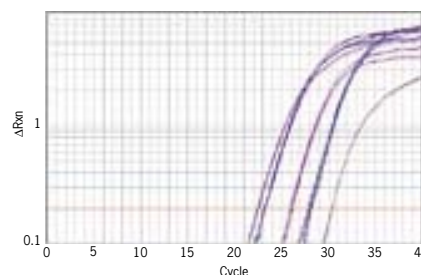
## Ensure Valid Results

The TaqMan Cells-to-C<sub>T</sub> Control Kit is available for use with the TaqMan Gene Expression Cells-to-C<sub>T</sub> Kit:

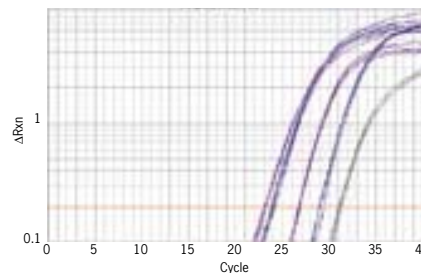
- To monitor for RT and qPCR inhibition
- As an indicator of adequate sample input
- As an endogenous control for assay normalization



Panel A. Correlation of Real-Time Results.



Panel B. Five TaqMan® Assays Using Cells-to-C<sub>T</sub>™ Lysates.



Panel C. Five TaqMan® Assays Using Purified RNA.

**Figure 1. Equivalent Real-Time PCR Results From TaqMan® Gene Expression Cells-to-C<sub>T</sub>™ Kit Lysates and Purified RNA.** TaqMan Gene Expression Cells-to-C<sub>T</sub> lysates and purified RNA from HeLa cells were prepared in parallel and evaluated with 128 TaqMan Gene Expression Assays on an Applied Biosystems 7900HT Real-Time PCR System. The C<sub>T</sub> value obtained across all assays using TaqMan Gene Expression Cells-to-C<sub>T</sub> lysates is plotted against the C<sub>T</sub> value for the same assays using purified RNA. R<sup>2</sup> value = 0.9107. Detailed amplification plots for selected assays from Cells-to-C<sub>T</sub> lysates (B) and purified RNA (C) are shown for 5 TaqMan Gene Expression Assays.