

## **Gene Expression Analysis You Can Count On** *Outstanding FastStart signal quality and performance for all real-time PCR platforms*

Make the FastStart Enzyme switch today!

Use our FastStart qPCR product line to consistently achieve sensitive, specific and reproducible results. These hot start master mixes maximize signal quality in qPCR gene expression assays on all real-time PCR instruments.



- Obtain superb signal output from your real-time PCR Experience Roche's eminence in producing real-time PCR master mixes. Enjoy sensitivity and high resolution with smooth rising amplification curves.
- Increase qPCR sensitivity and specificity for lower cycle threshold (C<sub>t</sub>) values using hot-start FastStart Taq DNA Polymerase.
- Ensure qPCR reproducibility with purified nucleotides in a master mix formulated for high fluorescent signal output.
- Amplify and detect a broad range of DNA and cDNA targets irrespective of GC or AT content, up to 500 bp long.



Figure 1: Quantification of a human globin gene with FastStart Universal SYBR Green Master (Rox) using an Applied Biosystems 7500 Real-Time PCR System, shows higher sensitivity and specificity.

**A.** FastStart Universal SYBR Green Master (Rox) mix.**B.** PCR master mix from another supplier.

For more information about our complete line of FastStart reagents for your workflow, please visit our Gene Expression Analysis Special Interest site at: www.gene-expression.roche.com

## Use FastStart Taq DNA Polymerase on any real-time PCR instrument

Combine FastStart Universal Probe Master (ROX) or FastStart TaqMan<sup>®</sup> Probe Master reagents with hydrolysis probes from the Universal ProbeLibrary for powerful gene expression assays on any real-time PCR instrument (see Figure 2).



Figure 2. Universal ProbeLibrary assays versus those with reagents from another supplier, using a real-time PCR instrument other than the LightCycler® System. Cellular RNA was isolated and transcribed using the Transcriptor First Strand cDNA Synthesis Kit. Universal ProbeLibrary assays (in purple) were performed using the FastStart TaqMan® Probe Master, whereas assays (in blue) used probes and master mix from another supplier. Target genes were PDLC (panel A) and STARD3 (panel B).

For all instruments requiring normalization with the Reference Dye ROX (*e.g.*, ABI 7500 and 7900HT Instruments)

Product	Cat.No.	Pack Size
FastStart Universal Probe Master	04 913 949 001	2 x 1.25 ml
(Rox)	04 913 957 001	10 x 1.25 ml
	04 914 058 001	10 x 5 ml
	04 914 066 001	50 ml
FastStart Universal SYBR Master	04 913 850 001	4 x 1.25 ml
(Rox)	04 913 914 001	10 x 5 ml

For all instruments not requiring normalization with Reference Dye ROX

Product	Cat.No.	Pack Size
FastStart TaqMan® Probe Master	04 673 409 001 04 673 417 001 04 673 433 001	2 x 1.25 ml 10 x 1.25 ml 10 x 5 ml
FastStart SYBR Green Master	04 673 484 001 04 673 492 001	4 x 1.25 ml 10 x 5 ml

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## Discover gene expression differences in your real-time PCR assay

HeLa cells were transfected using the X-tremeGENE siRNA Transfection Reagent followed by RNA isolation with the High Pure RNA Isolation Kit and reverse transcription with the Transcriptor First Strand cDNA Synthesis Kit. qRT-PCR was performed (see Figure 3) with Universal ProbeLibrary probes using the ABI 7900HT Real-Time PCR Instrument (Applied Biosystems) and FastStart Universal Probe Master (Rox).



Figure 3: Overexpression of miRNA-21 leads to reduced levels of PDCD4 mRNA (green bar), while downregulation of miRNA-21 does not affect PDCD4 mRNA levels (yellow bar). Data courtesy of U. Tschulena, DKFZ Heidelberg, Germany

## **Related products**

Product	Cat.No.	Pack Size
High Pure RNA Isolation Kit	11 828 665 001	50 isolations
High Pure RNA Tissue Kit	12 033 674 001	50 isolations
Transcriptor First Strand cDNA Synthesis Kit	04 379 012 001 04 896 866 001 04 897 030 001	50 reactions 100 reactions 200 reactions

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