

AffinityScript One-Step RT-PCR Kit

Looking for unsurpassed performance from a one-step RT-PCR kit? You just found it!

Data Sheet

The AffinityScript One-Step RT-PCR Kit outperforms the competition with unparalleled yield, sensitivity and specificity. The AffinityScript One-Step RT-PCR Kit provides a complete system for fast, high-yield, reliable single-tube RT-PCR. The master mix format, coupled with robust performance and rapid cycling conditions, makes this system ideal for gene profiling and other high-throughput end-point RT-PCR applications.

With AffinityScript One-Step RT-PCR, you can:

- Achieve full length, high fidelity RT-PCR from targets up to 9.5 kb in length
- Obtain superior PCR yield due to the enhanced processivity of Herculase II fusion DNA polymerase and the ArchaeMaxx PCR enhancing factor
- Overcome secondary structure in difficult and GC-rich targets
- Perform the RT step at a temperature of your choosing
- Amplify multiple targets in one tube at the same time

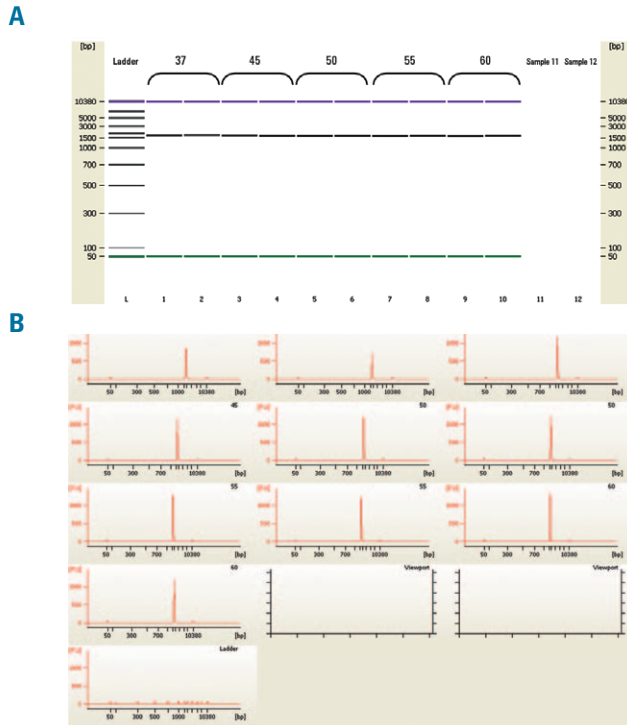


Figure 1. Broad Temperature Range of AffinityScript One-Step RT-PCR Kit
Ten nanograms of mouse liver total RNA was amplified with the AffinityScript One-Step RT-PCR kit with primers specific for a 1.6 kb amplicon of the mouse GPT gene. The initial incubation was performed at 37, 45, 50, 55 or 60°C for 30 minutes followed by a 2 minute denaturation step at 95°C and 40 cycles of 95°C for 20s, 58°C for 20s and 72°C for 72s. 1 µl of PCR product from each RT-PCR reaction was run on the Agilent Technologies 2100 Bioanalyzer. Data is presented in the form of a gel (A) and the corresponding electropherogram (B).

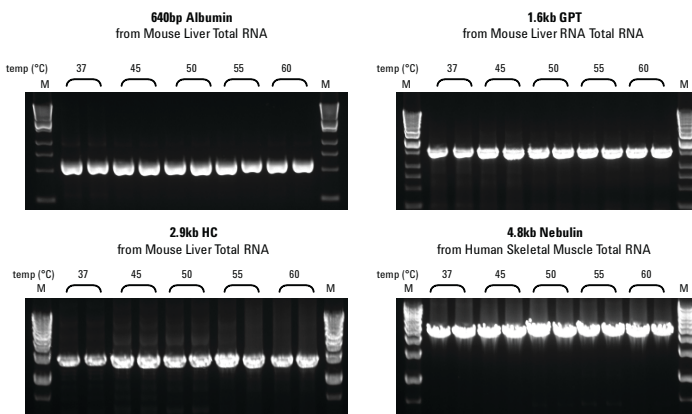


Figure 2. Broad Temperature Range of AffinityScript One-Step RT-PCR Kit
Temperatures for RT were varied from 37 – 60°C for 5 minutes (Alb), 15 minutes (GPT), or 30 minutes (Complement and Nebulin); followed by 1 minute denaturation at 95°C and 40 cycles of 95°C for 20s, 58 or 60°C for 20s and 68°C for 45s per kb product respectively. A final 3 minute extension at 68°C followed. Lane M: 1 Kb DNA ladder.

AffinityScript One-Step RT-PCR Kit utilizes the multiple temperature reverse transcriptase (RT) which shows optimal activity over a broad temperature range, from 42°C to 55°C, allowing greater flexibility in first-strand synthesis conditions (Figure 1). The AffinityScript RT provides excellent cDNA yields, full-length cDNAs, and superior RT performance for both routine and challenging RNA samples. The cDNA is amplified in the same tube by Herculase II fusion DNA polymerase, a highly processive *Pfu*-based DNA polymerase containing a high affinity double-stranded DNA binding domain.

For full-length RT-PCR of long templates, the AffinityScript One-Step RT-PCR Kit demonstrates superior yield and length compared to the competition (Figure 2).

AffinityScript RT routinely detects and amplifies targets using 1 ng of total RNA (Figure 3).

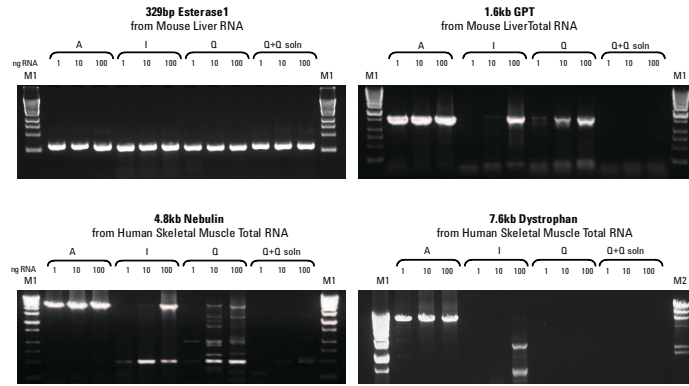


Figure 3
Comparison of One-Step RT-PCR systems

Total RNA (1, 10 and 100 ng) was amplified for each target using manufacturers recommended protocol. A- AffinityScript One-Step RT-PCR Kit; I – Competitor I; Q – Competitor Q; Q+Q soln – Competitor Q with Q solution added. M1: 1 Kb DNA ladder; M2: lambda/HindII marker.

The kit combines the high-performance of AffinityScript RT with Herculanse II fusion technology to produce better yield specificity than other one-step RT-PCR kits (Figure 4).

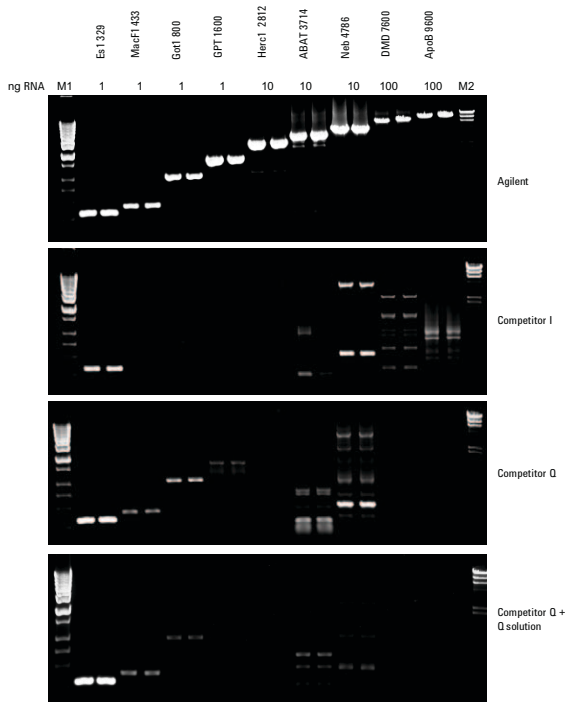


Figure 4
Increased Sensitivity with the AffinityScript One-Step RT-PCR Kit

Total RNA (1, 10 and 100 ng) was amplified for each target using manufacturers recommended protocol. A- AffinityScript One-Step RT-PCR Kit; I – Competitor I; Q – Competitor Q; Q+Q soln – Competitor Q with Q solution added. M1: 1 Kb DNA ladder; M2: lambda/HindII marker.

You can even detect multiple targets of interest to be amplified simultaneously (Figure 5) saving time and reagents.

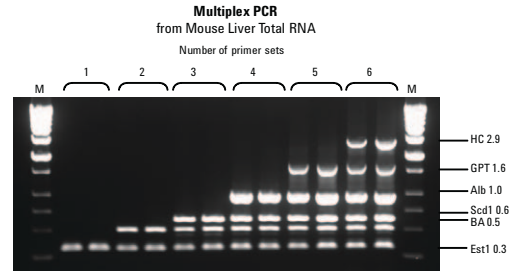


Figure 5
AffinityScript RT allows Amplification of Multiple Targets Simultaneously

One to 6 targets were amplified using the AffinityScript One-Step RT-PCR Kit. Group 1: Est1 – Esterase; group 2: BA – β -actin; group 3: Scd1 - stearyl-Coenzyme A desaturase 1; group 4: Alb – Albumin; group 5: GPT - glutamic pyruvic transaminase; group 6: 1HC – hemolytic complement; M: 1 Kb DNA ladder.

For your added peace of mind, AffinityScript One-Step RT-PCR Kit contains a recombinant RNase inhibitor to minimize RNA degradation.

Description	Quantity	Reactions	Catalog No.
AffinityScript One-Step RT-PCR Kit	1	100	600188

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