

AffinityScript™ Multiple Temperature Reverse Transcriptase

The AffinityScript™ Multiple Temperature Reverse Transcriptase is engineered for high affinity to primer template complexes and thermostability from 37°C to 55°C, allowing you to produce high yields of full-length cDNA.

- + Robust cDNA synthesis across a broad range of temperatures from 37°C to 55°C
- + High affinity for primer-template complexes promotes robust cDNA yield
- + Produces higher yield of amplifiable cDNA than SuperScript® II and III RTs
- + Synthesizes long cDNA better than SuperScript® II and III RTs from small amounts of input RNA
- + Ability to reverse transcribe through secondary structure
- + Strict enzyme purity specifications ensures no contaminating RNase and exonuclease activities

Our AffinityScript Reverse Transcriptase® (RT) products are the ideal choice for high cDNA yield and sensitivity with convenient and economical product formats. The AffinityScript™ Multiple Temperature Reverse Transcriptase with an optimal, broad reaction temperature range from 37°C to 55°C delivers reverse transcription at your temperature of choice. With 10-fold higher affinity to primer:template complexes compared to conventional MMLV reverse transcriptases, our AffinityScript RT promotes excellent yields from low RNA starting amounts in RT-PCR and can produce full-length cDNA up to 20 kb. Additionally, our specially optimized QPCR cDNA synthesis master mix reduces the reaction time to 15 minutes while delivering the highest sensitivity in two-step QRT-PCR.

Reverse Transcriptase	Optimal Reaction Temperature	Half Life at 55°C	cDNA Length	15-minute cDNA Synthesis Protocol for QPCR Amplification	List Price Per Reaction*
AffinityScript™ RT	37-55°C	35 min	20 kb	Yes	\$3.36 €3.36
SuperScript® II RT	42°C	10 min	9 kb	No	\$4.38 €4.06
SuperScript® III RT	50°C	20 min	9 kb	No	\$4.56 €4.40

Table 1
Best Overall Performance

Our AffinityScript™ reverse transcriptase outperforms competitor enzymes in reaction temperature flexibility, cDNA length capability, half life, and price per reaction.

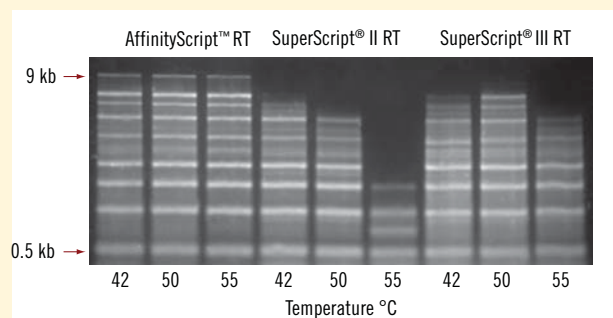


Figure 1
Highest cDNA Yield

AffinityScript™ RT generates the highest cDNA yield of the longest fragments across the broadest range of temperature. The 9-kb band (top band) is only visible in the AffinityScript™ RT lanes.

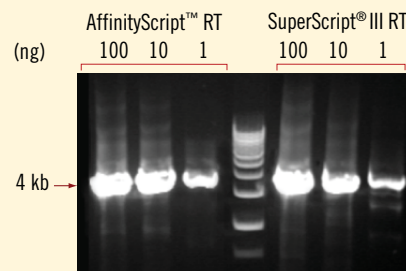


Figure 2
AffinityScript™ RT Delivers High Yield from the Lowest Starting Amount of RNA in End Point RT-PCR

cDNA was synthesized from HeLa total RNA using the AffinityScript™ RT (42°C), and SuperScript® III RT (50°C) according to manufacturers' instructions. The PicoMaxx® enzyme was used PCR amplify a 2-kb fragment from both populations of cDNA. Our AffinityScript™ RT generated the most cDNA from the lowest RNA input compared to SuperScript® III RT.

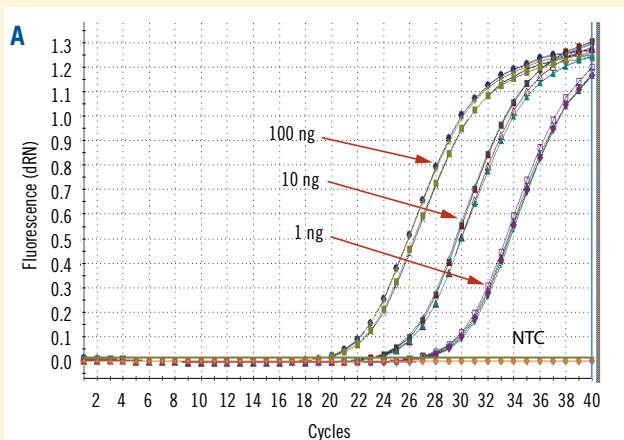


Figure 3

The AffinityScript™ QPCR cDNA Synthesis Kit Delivers Robust cDNA Synthesis Across Multiple Temperatures

We synthesized cDNA from total RNA using different reaction temperatures (42, 50, and 55°C) with oligo dT primers. Template amounts indicated are RNA amounts added at the cDNA synthesis level (100 ng, 10 ng, 1 ng). Using our Brilliant® SYBR® Green QPCR Master Mix for QPCR amplification of the ODC gene, the same Ct was observed for each RNA input regardless of RT reaction temperature (**Panel A**). For example, using 100 ng, the Ct for 42°C was 19.27; for 50°C, 19.30; for 55°C, 19.44 (**Panel B**)

Temperature (°C)	RNA Amount	Ct (dRn)
42	100 ng	19.27
42	10	23.00
42	1	26.59
42	NTC	No Ct
50	100 ng	19.30
50	10	22.83
50	1	26.31
50	NTC	No Ct
55	100 ng	19.44
55	10	23.12
55	1	26.92
55	NTC	No Ct

Products	Qty	Catalog No.
AffinityScript™ Multiple Temperature Reverse Transcriptase	10 rxn	600105
	50 rxn	600107
	200 rxn	600109
AffinityScript™ Multiple Temperature cDNA Synthesis Kit	50 rxn	200436
AffinityScript™ QPCR cDNA Synthesis Kit	50 rxn	600559

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a. Patents pending.

* Prices in US Dollars and Euros. US prices valid in US only. Euro prices valid in Austria, Belgium, France, Germany, Luxembourg, and the Netherlands only. For pricing in other countries, please contact your Stratagene representative or your local distributor.

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