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Expand Your Horizons

FIREScript™ Reverse Transcriptase

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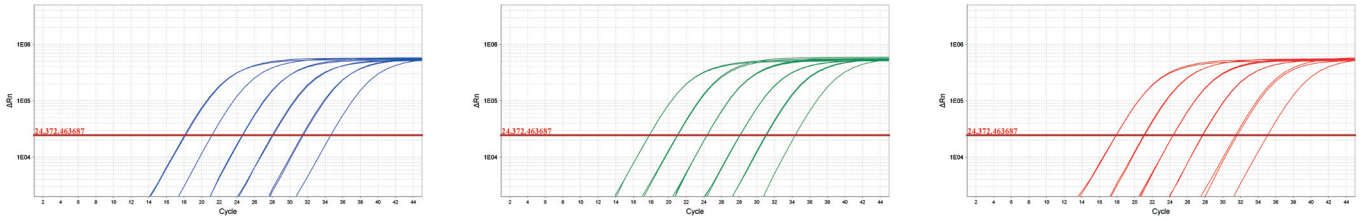
FIREScript™ reverse transcriptase

FIREScript™ is an improved version of Murine Moloney Leukemia Virus (M-MLV) reverse transcriptase (RT) with exceptional stability at room temperature, improved thermostability, substantially faster synthesis rates and higher sensitivity compared to the wild-type M-MLV RT. FIREScript™ is used for first strand cDNA synthesis from total RNA or purified mRNA and is suitable for wide range of reaction temperatures.

Features

- Stable at room temperature for **30 days**
- Suitable for working between **37-60°C**
- cDNA synthesis completed in **15 minutes**
- Detecting total RNA amounts from **0.01 ng**
- Generates full length cDNA of at least **8 kb**
- Full RNase H activity
- Available as a stand-alone enzyme or formulated for flexible KIT or convenient MIX to support different needs



37°C 50°C 60°C

Figure 1. Human total RNA (1 µg to 0.01 ng) was converted into cDNA using oligo-dT primers and FIREScript™ RT (10 U/µl) in 20 µl reaction for 15 minutes. cDNA was diluted 1:10 and beta-2–microglobulin (ß2M) gene was amplified using HOT FIREPol® EvaGreen® qPCR Mix Plus (Solis BioDyne).

Request a FREE SAMPLE!

High thermostability

FIREScript™ enables to perform cDNA synthesis at higher temperature, improving reaction specificity particularly with gene specific primers. At elevated temperatures GC-rich regions, tight secondary and tertiary structures of the RNA molecule are easier to denature which opens the target regions for primer annealing, for binding of reverse transcriptase and results in highly specific cDNA synthesis.

FIREScript™ works well with oligo-dT, random and gene specific primers at wide range of temperatures between 37 and 60°C. To increase the yield of longer templates (>5 kb) reaction can be performed at lower temperature (37-50 °C) for longer time (30-60 minutes).

Reaction speed

Complete cDNA synthesis in 15 minutes makes FIREScript™ one of the fastest reverse transcriptases on the market and ideal for high-throughput screening platforms where every minute counts. The appropriate time needed for reverse transcriptase reaction run in the 37–60°C temperature range may vary, depending on the amount of RNA template, the primers used and the method of analysis of the products.

Did you know?

With FIREScript™ you can reduce reaction time up to 4x.

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Request a FREE sample at **solisbiodyne.com** or **info@solisbiodyne.com**

Stable at room temperature for 30 days

Proprietary "stability TAG" significantly improves stability at room temperature, making it the only product on the market which is safe to be handled without ice during reaction set-up as well as during shipping across the world. FIREScript™ is number one choice for field-work as well as for high-throughput screening platforms.

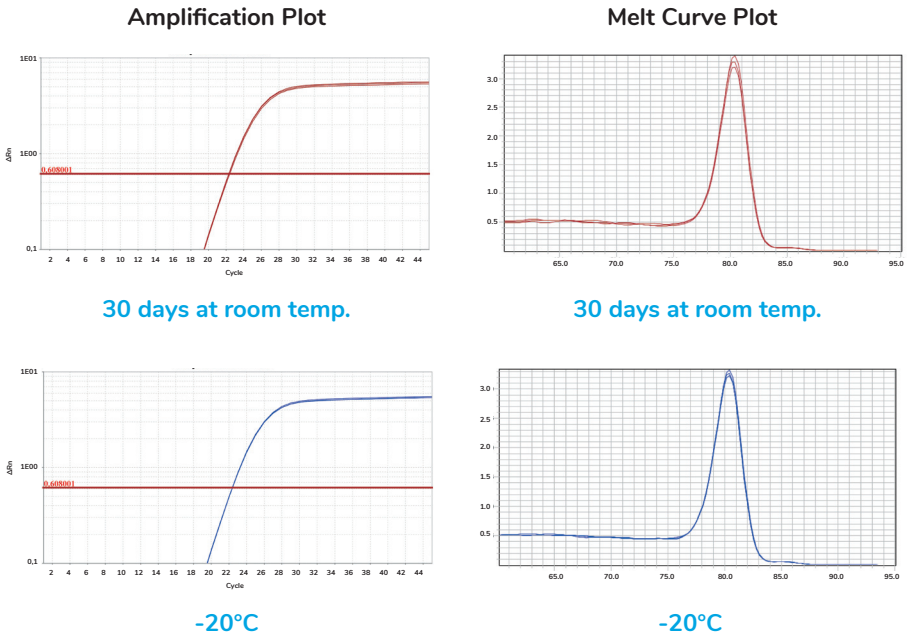

Figure 2. Human total RNA (10 ng) was converted into cDNA using oligo-dT primers and FIREScript™ reverse transcriptase (10 U/µl). Real-time PCR was performed using ß2M primers and HOT FIREPol® EvaGreen® qPCR Mix Plus (Solis BioDyne), no changes of Ct value and melt curve analysis were detected after 30 days storage of reverse transcriptase at room temperature (22°C) compared to storage at -20 °C.

Did you know?

Taking your reagents to field-trips is not a problem anymore.

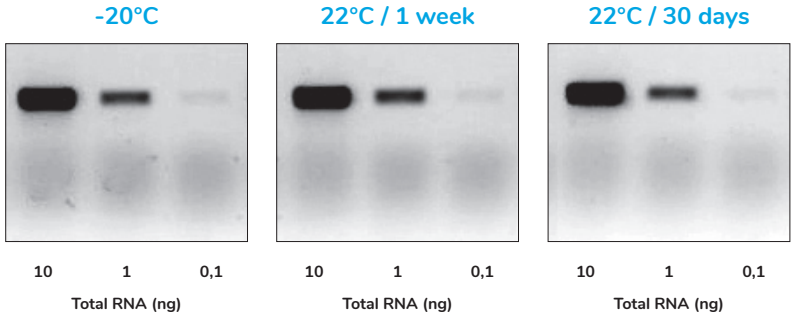

Figure 3. Human total RNA (10 ng, 1 ng and 0.1 ng) was converted into cDNA using oligo-dT primers and FIREScript™ reverse transcriptase (10 U/µl) that had been stored at -20°C and at room temperature (22°C) for 1 week and for 30 days. PCR was performed using ß2M primers and HOT FIREPol® Blend Master Mix (Solis BioDyne).

Product format

FIREScript™ KIT	FIREScript™ RT cDNA Synthesis KIT	FIREScript™ RT cDNA Synthesis MIX
1) FIREScript™ reverse transcriptase 2) 10x RT Reaction Buffer with DTT	1) FIREScript™ reverse transcriptase 2) RiboGrip™ RNase Inhibitor 3) 10x RT Reaction Buffer with DTT 4) 20 mM dNTP 5) Oligo (dT) Primer 6) Random Primers 7) Water, nuclease free	1) FIREScript™ RT + RiboGrip™ 2) 10x RT Reaction Premix* 3) Water, nuclease free

* Select from 4 priming options: 1) no primers 2) oligo-dT 3) random primers 4) oligo-dT + random primers

Applications

- First strand cDNA synthesis for 2-step RT-PCR and RT-qPCR
- Reverse transcription at high temperature to reduce effects of secondary structure

Publications

- Aufschnaiter, A. et al. (2018). The Enzymatic Core of the Parkinson's Disease-Associated Protein LRRK2 Impairs Mitochondrial Biogenesis in Aging Yeast. *Frontiers in Molecular Neuroscience*, 11, 205.
- Popēna, I. et al. (2018). Effect of colorectal cancer-derived extracellular vesicles on the immunophenotype and cytokine secretion profile of monocytes and macrophages. *Cell Communication and Signaling*, 16(1), 17.
- Wojciechowicz, T. et al. (2018). Suppressive effects of γ-conglutin on differentiation of 3T3-L1 preadipocytes. *International Journal of Food Science & Technology*, published online June 19.

Did you know?

With our products you can save up to 4x on shipping cost.

Sounds unbelievable?

Ask for FREE SAMPLE!

Ordering information

Product	CAT. NO.	RXN / 20 µl
FIREScript™ KIT	06-13-0000S 06-13-00050 06-13-00200	20 (sample) 50 200
FIREScript™ RT cDNA synthesis KIT	06-15-0000S 06-15-00050 06-15-00200	20 (sample) 50 200
FIREScript™ RT cDNA synthesis MIX SAMPLE**	06-16-0000S	20 (sample)
FIREScript™ RT cDNA Synthesis MIX without primers	06-17-00100 06-17-00500	100 500
FIREScript™ RT cDNA Synthesis MIX with Oligo (dT) primer	06-18-00100 06-18-00500	100 500
FIREScript™ RT cDNA Synthesis MIX with Random primers	06-19-00100 06-19-00500	100 500
FIREScript™ RT cDNA Synthesis MIX with Oligo (dT) and Random primers	06-20-00100 06-20-00500	100 500
RiboGrip™ RNase Inhibitor	06-22-00400 06-22-01000 06-22-04000	20 (sample) 50 200

** FIREScript™ RT cDNA synthesis Mix free sample (20 rxn) includes all 4 priming options to help you first identify the most suitable option for your specific application.

European Union
European Regional Development Fund

Investing in your future

Doing 1-step RT-qPCR?

Try our new highly specific **SOLIScript™ 1-step Probe Kit** (#08-57-00250). Dye-based 1-step RT-qPCR Kit available soon!

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