

NxtScript 2G Reverse Transcriptase

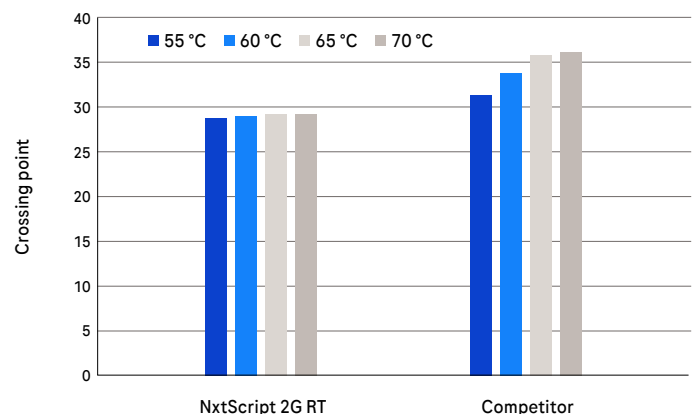
Heat-powered RT-PCR performance in a new generation

Highest RT temperature simplifies RT-PCR design

The NxtScript family is a designed mutated reverse transcriptase cluster selectively evolved toward thermostability at increasingly higher temperatures. NxtScript 2G RT is the latest member of the family and pushes the temperature of the RT step to new levels: no loss of activity even at 70 °C (Fig. 1). At this reaction temperature, common restrictions of RT-PCR are removed, simplifying assay design and eliminating compromises.

- Easily detect difficult RNA targets**
 At higher temperatures, RNA secondary structures unravel and no longer prevent amplification.
- Tackle any GC-rich regions**
 The thermostability of the enzyme no longer limits melting temperature.
- Work with any target of interest**
 Make no compromises in your RT-PCR design because of target sequence.

Thermostability of NxtScript 2G RT vs. competitor – up to 70 °C



01

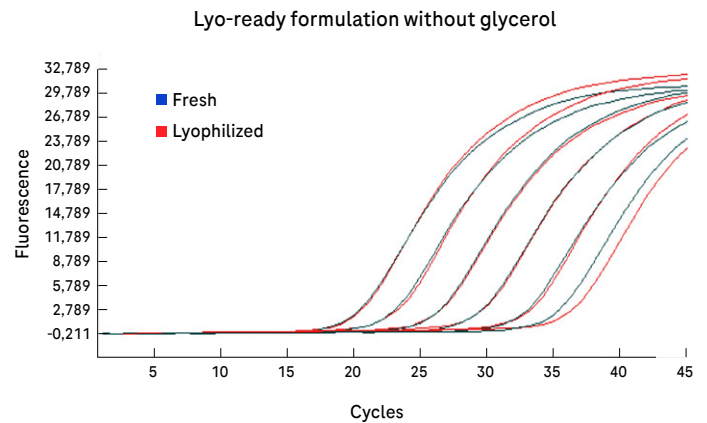
Achieving extreme thermostability. The performance of NxtScript 2G RT was tested against a competitor product at various temperatures. NxtScript 2G RT shows exceptional activity stability across the thermal spectrum relevant for high-temperature reverse transcription (Roche evaluation data).

Lyo-ready formulation for any assay architecture

Easily integrate NxtScript 2G RT into your optimized assay architecture, lyophilized alone (Fig. 2) or in mixture with other reagents. NxtScript 2G RT is available in a glycerol-free formulation at a concentration of ≥ 500 U/ μ l.

Inhibitor tolerance and high purity specifications deliver consistent performance

NxtScript 2G RT is produced in state-of-the-art manufacturing facilities under strict production standards that guarantee narrow quality specifications. Every lot of NxtScript 2G RT is purity tested to consistently meet industry-leading thresholds for human DNA and *Escherichia coli* DNA contamination. The versatility of NxtScript 2G RT is further enhanced by proven inhibitor tolerance. NxtScript 2G RT generated cDNA for instance from β -2M and β -Actin targets in 30-minute RT reactions at 65 °C with only slightly higher Cp values in the presence of lithium chloride, TRIzol or guanidine thiocyanate. Whether working with difficult sample types or shortening time-to-result by reducing sample preparation, count on reliable results.



02

NxtScript 2G RT was lyophilized directly in storage buffer without further optimization, stored at -20 °C for 2 weeks and tested against retained fresh samples. The performance of the lyophilized samples showed no loss in activity (Roche evaluation data).

Specification

NxtScript 2G Reverse Transcriptase, conc.

Appearance	clear, colorless solution
Activity	≥ 500 U/ μ l
Nicking activity (pBR 322 DNA)	Not detectable with up to 75 U after 16 hours incubation at +37 °C
Unspecific endonucleases (MWM III DNA)	Not detectable in up to 75 U after 16 hours incubation at +37 °C
RNase (MS2 RNA)	Not detectable in up to 75 U after 1 hour incubation at + 37°C
DNA of <i>Escherichia coli</i>	≤ 100 pg DNA/ml enzyme
Human DNA	≤ 15 ng DNA/ml enzyme
Performance test	TwoStep RT-qPCR, β -Actin (on LC480 II with human reference RNA and β -Actin assay)
Stability	12 months at -15 to -25°C

Ordering information

Product	Pack size	Catalog Number
NxtScript 2G Reverse Transcriptase, conc.	Custom fill	09 085 220 103
Related products	Pack size	Catalog Number
Thermostable reverse transcriptases in high concentration		
NxtScript Reverse Transcriptase, conc.	custom fill	07 051 166 103
NxtScript Reverse Transcriptase, high conc.	1 MU	09 917 225 001
Lyo-ready HotStart DNA Polymerases & Masters		
KAPA3G HotStart DNA Polymerase, Glycerol-free, 30 U/μL	custom fill	08 918 651 103
KAPA3G HotStart Master	custom fill	09 084 711 103
AptaTaq DNA Polymerase, 50 U/μl	custom fill	05 187 605 103
AptaTaq Genotyping Master	custom fill	05 890 152 103

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