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 (Figure 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](image)

Figure 1: 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.

**Lyo-ready formulation for any assay architecture**
Easily integrate NxtScript 2G RT into your optimized assay architecture, lyophilized alone (Figure 2) or in mixture with other reagents. NxtScript 2G RT is available in a glycerol-free formulation at a concentration of ≥ 500 U/µl.
**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.

### Specification

**NxtScript 2G Reverse Transcriptase, conc.**

- **Appearance**: clear, colorless solution
- **Activity**: ≥ 500 U/µl
- **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 Escherichia coli**:
  - ≤ 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)
  - 12 months at –15 to –25°C
- **Stability**:

### Ordering information

#### Product

- **NxtScript 2G Reverse Transcriptase, conc.**
  - Pack size: custom fill
  - Cat. number: 09 085 220 103

#### Related products

**Lyo-ready HotStart DNA Polymerases & Masters**

- **Pack size**: custom fill
- **Cat. number**
  - KAPA3G HotStart DNA Polymerase, Glycerol-free, 30 U/µl: 08 918 651 103
  - KAPA3G HotStart Master: 09 084 711 103
  - AptaTaq DNA Polymerase, 50 U/µl: 05 187 605 103
  - AptaTaq Genotyping Master: 05 890 152 103

### Regulatory disclaimer

For further processing only. *AptaTaq DNA Polymerase, 50 U/µl* and *AptaTaq Genotyping Master*: For customers in the European Economic Area: Contains SVHC: octyl/nonylphenol ethoxylates. For further processing on its own or in a mixture as part of an IVD method and under controlled conditions only – acc. to Art. 56 (3) and 3 no. 23 REACH Regulation.

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