

Version No.: FAL1715

GenFQ III Reverse Transcriptase

GenFine Code: A107

Storage conditions: Transportation at $\leq 0^{\circ}\text{C}$, Store at $-30 \sim -15^{\circ}\text{C}$, Valid period 2 years.**Description:**

GenFQ III Reverse Transcriptase is a new generation of genetically engineered reverse transcriptase with reduced RNase H activity and increased thermal stability. This enzyme can be used to synthesize first-strand cDNA at temperatures from 42°C to 55°C . The enzyme is most active at 50°C , providing higher specificity, higher yield of cDNA and more full-length cDNA product, which is very helpful when dealing with RNA that contains high amounts of secondary structure. This product can achieve the higher cDNA synthesis efficiency in all regions of mRNA with mixed Oligo dT and Random primers, which helps to improve the authenticity and repeatability of quantitative results.

Components:

Components	A107
5 × GenFQ RT Buffer	500 μl
GenFQ III Reverse Transcriptase (200 U/ μl)	50 μl
Primer Mix	50 μl

Product features:

Higher enzyme activity: high efficiency of reverse transcriptase activity with good compatibility.

Wide range of substrates: applies to all kinds of RNA.

long cDNA product: The length of the first-strand cDNA was up to 12 kb.

Applications:

1. First strand cDNA synthesis
2. cDNA library construction
3. One Step RT-PCR/RT-qPCR
4. RACE analysis

Protocol:**1. Set up the following mixture in an RNase-free centrifuge tube.**

Components	Volume (20 μl)
5 × GenFQ RT Buffer	4 μl
Primer Mix or Gene Specific Primers (2 μM)	1 μl
dNTPs (10 mM)	1 μl
GenFQ III Reverse Transcriptase (200 U/ μl)	1 μl
RNase inhibitor (40 U/ μl)	1 μl

Total RNA (10 pg~1 ug) or Poly A mRNA (10 pg~100 ng)	X μ l
RNase-free ddH ₂ O	Up to 20 μ l

Mix and briefly centrifuge the components.

2. Thermal cycling conditions:

Step	Temperature	Time
1	25 °C	5~10 min
2	50 °C*	15~45 min
3	85 °C	2 min

* If RNA template with high secondary structure or GC region, the RT temperature can be increased to 55°C. The product can be used immediately for qPCR or stored at -20°C for using within half a year. For long-term storage, it is recommended to store at -80°C and avoid repeated freezing and thawing.

Notes:

To avoid RNase contamination, please keep the operating area clean; gloves and masks should be worn during the operation. Tubes, tips and other materials all should be RNase-free.

[Symbols]

Symbols	Meanings
	Manufacturer
	Authorized representative in the European Community
	<i>In vitro</i> diagnostic medical device
	This product fulfills the requirements of the European Directive 98/79 EC for <i>in vitro</i> diagnostic medical devices.
	Catalogue number
	Batch code
	Date of manufacture
	Use-by date
	Temperature limit
	Consult instructions for use
	Keep dry
	Keep away from sunlight
	Do not re-use
	Do not use if package is damaged



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