

# **FastGene**<sup>®</sup> Scriptase Basic

**Enzyme**

**Manual**

**LS52**

Version 1.2

April 2017

**Store at -20°C**

 **NIPPON Genetics EUROPE**

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## Product description

### Reverse transcription

The ability to reverse the process of translation from DNA to RNA has been a crucial application of modern molecular biology. The enzyme, a RNA-dependent DNA-Polymerase is called reverse transcriptase. Reversing the messenger RNA delivers the complementary DNA, which can be detected or quantified using PCR and qPCR approaches.

The lack of the 3' → 5' exonuclease activity made the MuLV increasingly the enzyme of choice. The MuLV has also been used as a template to engineer new enzymes with additional features. The FastGene Scriptase Basic is an enhanced version of the original MuLV RT.

### Kit Content (100 Reactions)

- FastGene® Scriptase Basic (200 U/μl)
- 10x FastGene® Scriptase Basic buffer
- dNTP Mixture (2 mM each)
- Sterile water (RNase free)

### Quality Control

- Purity: >99% on SDS-PAGE
- Endonuclease-free
- Exonuclease-free
- RNase-free
- Inhibitor-free
- Satisfactory Yield

# Protocol

## Concentration of template RNA

- Total RNA: 1 ng-5  $\mu$ g
- Messenger RNA (mRNA): 1 ng-0.25  $\mu$ g
- Specific RNA: 0.01 pg-0.5  $\mu$ g

1. Mix the recommended concentration of RNA template with 1  $\mu$ l oligo dT primer (80  $\mu$ M) and/or 1  $\mu$ l random hexamer (100 $\mu$ M)
2. Incubate at 42 °C for 5 minutes.

*Note:* Add an additional annealing step of 10 minutes at 25°C if random hexamers are used.

3. Store the RNA mixture on ice and add followed components:

10x FastGene® Scriptase Basic buffer	2 $\mu$ l
FastGene® Scriptase Basic (200 units/ $\mu$ l)	1 $\mu$ l
dNTP mixture (10 mM each)	2 $\mu$ l
RNA-Template	x $\mu$ l
Primer	1-2 $\mu$ l
RNase Inhibitor	0,5 $\mu$ l
Distilled Water	up to 20 $\mu$ l

4. Incubate at 42°C for 60 min.

*Note:* FastGene® Scriptase Basic can perform optionally over the full range of 42°C-50°C after optimization.

5. Incubate 90 °C for 5 min for complete enzyme deactivation.

# **FastGene**<sup>®</sup> Scriptase Basic

## Enzyme

Please contact us for additional information:

**info@nippongenetics.eu**

Please contact our technical support:

**support@nippongenetics.eu**

LS52	<b>FastGene<sup>®</sup> Scriptase Basic</b> (20.000 units at 200 U/ $\mu$ l)	100 Reactions
LS62	<b>FastGene<sup>®</sup> Scriptase Basic cDNA Synthesis</b> containing Oligo dTs, random hexamer and RNase inhibitor	100 Reactions
LS53	<b>FastGene<sup>®</sup> Scriptase II</b> (20.000 units at 200 U/ $\mu$ l)	100 Reactions
LS63	<b>FastGene<sup>®</sup> Scriptase II cDNA Synthesis</b> containing Oligo dTs, random hexamer and RNase inhibitor	100 Reactions

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