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FastGene® Scriptase Basic

Cat. No.	Pack Size
LS52	20,000 U
LS52s	2,000 U

Storage:
Store at -20°C.

Description:
FastGene® Scriptase Basic, an enhanced MuLV reverse transcriptase, is thermostable at 37-42°C and inactivated at 70°C for 10-15 minutes. It efficiently synthesizes human ACTB, GAPDH, and TFRC cDNAs at 37°C, with optimal temperatures varying by template. It can produce cDNAs up to 5 kb from RNA or DNA templates and has weaker RNase H activity compared to avian myeloblastosis virus RT.

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Characteristics:
- Molecular weight: 71 kDa
- Reaction temperature: 37°C or 42°C
- Heat inactivation: 70°C, 10 min

Applications:
- Synthesis of first-strand cDNA
- Array labeling
- cDNA library construction
- 3' and 5' RACE, RT-PCR
- Primer extension

Quality control:
- Purity: >99% on SDS-PAGE
- Endonuclease- and exonuclease-free
- RNase-free
- Inhibitor-free
- Satisfactory cDNA product yield and length

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Protocol:
1. Prepare the PCR mixture on ice with the following **components included in this kit**:

10x FastGene® Scriptase Basic Buffer	**2 µl**
FastGene® Scriptase Basic (200 units/µl)	**1 µl**
dNTP mixture (2 mM each)	**2 µl**
Template RNA* (not included)	**x µl**
Primer**	**1 µl**
RNase Inhibitor (40 units/µl) - optional	**0.5 µl**
Sterile water (RNase free)	**up to 20 µl**

*** Concentration of template RNA**
Total RNA: 1 ng-5 µg
Messenger RNA (mRNA): 1 ng-250 ng
Specifi RNA: 0.01 pg-0.5 µg
**** Prepare one of the following primers**
Oligo $(dT)_{18}$: 50-100 µM
Random hexamer: 50-100 µM
Specific primer: 15-20 pmol

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An additional annealing step is recommended if using random hexamer. Incubate at 25° for 10 min.

2. Incubate at 37°C or 42°C for 60 min.
3. Incubate at 95°C for 5 min to incactivate the reaction.

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

NIPPON Genetics EUROPE GmbH
Mariaweilerstr. 28 a; 52349 Düren; Germany
fax: +49 2421 55 496 11, phone: +49 2421 55 496 0
e-mail: info@nippongenetics.eu
www.nippongenetics.eu