



M-MuLV Reverse Transcriptase RNase H-

F-572

200 U/μl

Store at -20 °C

Stable for one year from the assay date

Description:

Moloney Murine Leukemia Virus (M-MuLV) Reverse Transcriptase RNase H⁻ (minus) is an RNA-directed DNA polymerase. This enzyme can synthesize a complementary DNA strand initiating from a primer using either single-stranded RNA (cDNA synthesis) or a single-stranded template. The absence of RNase H activity enhances the synthesis of long cDNAs.

Source:

M-MuLV RNase H⁻ Reverse Transcriptase is purified from a strain of *E. coli* that carries the Reverse transcriptase gene from M-MuLV modified by site-directed mutagenesis to eliminate RNase H activity.

Storage buffer:

50 mM Tris-HCl (pH 7.6)
150 mM NaCl
1 mM EDTA
1 mM DTT
0.1 % NP40
50 % Glycerol (v/v)

Activity assay conditions:

50 mM Tris-HCl (pH 8.3 at 25 °C)
3.0 mM MgCl₂
75 mM KCl
10 mM DTT
0.5 mM [³H]-TTP
0.4 mM Poly(rA)•(dT)₁₈

10 X Reaction buffer concentrate:

500 mM Tris-HCl (pH 8.3 at 25 °C)
30 mM MgCl₂
750 mM KCl
100 mM DTT

Thaw at 37 °C. Triturate with pipet tip to dissolve, if necessary.

Unit definition:

One unit is defined as the amount of M-MuLV RT required to catalyze the incorporation of one nmol of dTMP into an acid-insoluble product in 10 minutes at 37 °C using Poly(rA)•(dT)₁₈ as a template primer.

**Ribonuclease Assay:**

Incubation of 100 U with 1 µg MS2 RNA (1h, 37 °C, 50 µl) results in the same RNA band as that produced without the enzyme.

Exonuclease Activity:

Incubation of 200 U for 4 hours at 37 °C in 50 µl assay buffer with 1 µg sonicated ³H DNA (2x10⁵ cpm/µg) released < 0.5 % of radioactivity.

Endonuclease Assay:

Incubation of 100 U with 1 µg φX174 RFI DNA (2 hours, 37 °C, 50 µl) gave <10% conversion to RFII.

*Upon receipt, centrifuge the vial in a microfuge to assure the full recovery of the enzyme. Due to the viscosity of the enzyme, maximum dispensing efficiency is achieved by the use of positive displacement pipets.

WARRANTY:

Finnzymes Oy warrants that this product will meet the specifications stated on the technical data section of this data sheet, and Finnzymes Oy agrees to replace the product free of charge if the product does not conform to the specifications. Notice for replacement must be given within 60 days.

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- That **ALL WARRANTIES OF MERCHANT ABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED AND WAIVED**;
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