SibEnzyme®

M-MuLV Reverse Transcriptase

S **E317**
5,000 units
200,000 u/ml *

Lot: 181
Exp: 07/20
Store at -20C

For more details scan the code

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CERTIFICATE OF ANALYSIS

Source:
An *E.coli* strain that carries the recombinant plasmid.

Description:
M-MuLV Reverse Transcriptase is an RNA directed DNA polymerase. This enzyme can synthesize a complementary DNA strand initiating from a primer using either RNA or single-stranded DNA as a template. The enzyme possesses an RNA-dependent and DNA-dependent polymerase activity, but lacks ribonuclease H activity specific to RNA-DNA hybrids. RNase H activity is eliminated by a point mutation in the RNase H domain of M-MuLV RT.

***High enzyme concentration may lead to RT-PCR inhibition. In this case the enzyme preparation should be diluted in 5, 10 or 20 times with M-MuLV Reverse Transcriptase dilution Buffer (supplemented).**

Storage Conditions:
10 mM KH_2PO_4 (pH 7.5), 200 mM NaCl, 0.1 mM EDTA, 7mM 2-mercaptoethanol, 50% glycerol.
Store at - 20° C.

1X SE-M-MuLV Reverse Transcriptase Buffer:
(pH 8.3@ 25° C):
50 mM Tris-HCl, 3 mM $MgCl_2$, 75 mM KCl, 10 mM DTT.

Unit Definition:
One unit is defined as the amount of enzyme required to incorporate 1 nmol of dTTP into an acid-insoluble material for 10 minutes at 37° C using poly(rA)-oligo(dT) as template primer.

Quality Control Assays:
Nonspecific endonuclease assay: No appearance of nicked DNA was detected after incubation of 1µg supercoiled pUC19 DNA with 200 units of enzyme for 4 hours at 37° C.

No alteration of the pattern of DNA bands was detected after incubation of 1µg λ/HindIII DNA fragments with 200 units of enzyme in 50 µl of reaction mixture for 16 hours at 37° C.

Oligonucleotide Assay:
No detectable degradation of a single-stranded and double-stranded deoxyribooligonucleotides was observed after incubation with 200 units of enzyme for 3 hours at 37° C.

Test for detection of RNase contaminants:
No fluorescence increasing was detected after incubation of 200 units of enzyme with 0.1 mM of fluorescent-labeled deoxyribooligonucleotide including ribonucleotide for 30 min at 37° C.
(B.R.Kelemen, T.A. Klink, M.A. Behlke, S.R.Eubanks, P.A. Leland, R.T. Raines.1999. *Nucleic Acids Res.*, 27, P. 3696-3701).

Reagents Supplied with Enzyme:
10X SE-M-MuLV Reverse Transcriptase Buffer.
Dilution Buffer.