

MMLV III Reverse Transcriptase

Highlights:

- One unit of MMLV III Reverse Transcriptase is defined as amount of enzyme which incorporates 1 nanomole of [3H] dTMP into an acid insoluble product in 10 minutes at 37°C using poly (A) - oligo (dT) as template - primer.
- RNase DNase Free
- Lacks DNA endonuclease activity and has a lower RNase H activity.
- High purity/high quality control
- Thermostable reverse transcriptase active between 42- 50°C.

Applications:

MMLV III Reverse Transcriptase has been used:

- To synthesize cDNA
- In quantitative Real Time-Polymerase chain reaction (RT-qPCR)
- In Reverse Transcription
- Preparation of cDNA libraries or for first strand cDNA synthesis
- For use in a 2-step RT-PCR assay
- For the synthesis of cDNA that is further used in cloning

Storage & Shelf Life

Recommended Storage at -20°C with a shelf life of 24 months

Product Description

MMLV III Reverse Transcriptase (MMLV RTIII) is a ~ 70kDa RNA dependent DNA polymerase that uses Single Stranded RNA or DNA as template. MMLV III RT lacks endonuclease activity and has lower RNase H activity.

Isolated from a recombinant source *E.coli* strain which harbours codon optimized gene from Moloney Murine Leukemia Virus.

Purity by SDS-PAGE

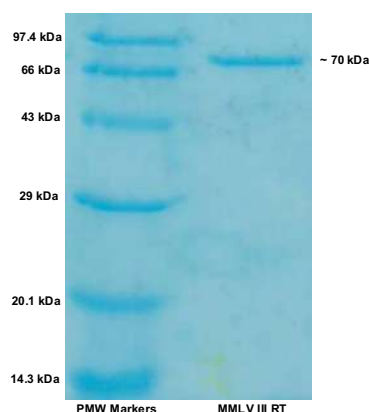


Fig 1: Purified MMLV III Reverse Transcriptase (MMLV III RT) was run on a 12% SDS PAGE and stained with Eeze Blue. (MMLV III RT) appeared as a single band at ~ 70 kDa

Sensitivity – Varying Units

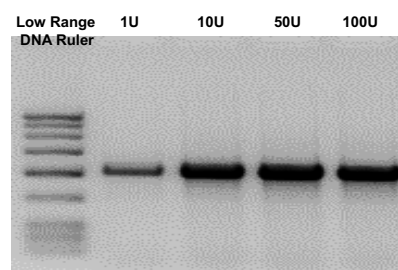


Fig 2A: RT PCR performed with 500 ng Mouse Total RNA template for 1kb GAPDH gene amplification. Different concentration of (MMLV RTIII) used to prepare cDNA and amplified using optimised buffer, Taq DNA Polymerase, amplification protocol and visualized by gel electrophoresis. Post RT PCR ,1kb GAPDH gene amplified at a concentration as low as 1U of (MMLV RTIII).

ISO9001:2015



ISO13485:2016



Sensitivity – Varying Template

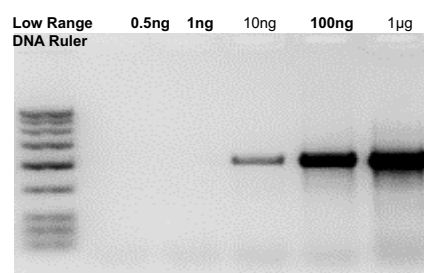


Fig 2B: RT PCR performed with Mouse Total RNA template for 1kb GAPDH gene amplification. Different concentration of template was prepared from 500ng stock and 1kb GAPDH gene amplified using optimised buffer , amplification protocol and visualized by gel electrophoresis. Post RT PCR , 1kb GAPDH gene amplified from a template at a concentration as low as 10ng on using (MMLV RTIII).

Amplification of different targets from HeLa RNA

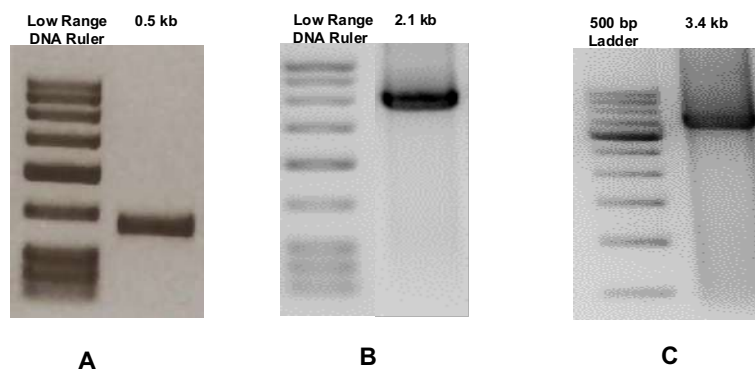


Fig 3 : RT PCR Amplification of different targets from 1µg HeLa RNA using MMLV III Reverse Transcriptase (MMLV RTIII)

Fig 3A: Glyceraldehyde 3-phosphate dehydrogenase (0.5 kb GAPDH)

Fig 3B: 2.1 kb fragment of poIE gene

Fig 3C: 3.4 kb fragment of poIE gene

Primers were designed for specific gene targets for HeLa RNA template and the target genes were amplified by optimised amplification protocol using (MMLV RTIII) . Specific genes efficiently amplified.

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Ordering Information

| Catalogue No | PI No | Product Description | Pack Size |
|---------------|---------|---|-----------|
| 0604500011730 | MME45S | MMLV III Reverse Transcriptase (100U/µl), | 1000 U |
| 0604500021730 | MME45L | MMLV III Reverse Transcriptase (100U/µl), | 5000 U |
| 0604500031730 | MME45B | MMLV III Reverse Transcriptase (100U/µl), | 10000 U |
| 0604500041730 | MME45HS | MMLV III Reverse Transcriptase (200U/µl), | 2000 U |
| 0604500051730 | MME45HC | MMLV III Reverse Transcriptase (200U/µl), | 10000 U |