Maxime™ RT-PCR PreMix Kit
QUICK GUIDE

Cat. No. 25131

1. KIT DESCRIPTION

iNtRON's Maxime™ RT-PCR PreMix Kit is an optimized, ready-to-use RT-PCR system containing all essential components required for cDNA synthesis and PCR amplification in a single tube for a 1-reaction scale. This system enables one-tube RT-PCR from RNA, minimizing handling steps and the risk of cross-contamination. i-StarTaq™ DNA Polymerase with hot-start PCR technology minimizes non-specific amplification formation. Furthermore, the inclusion of a tracking dye/gel loading buffer allows direct loading onto agarose gels without additional sample preparation. Every manufacturing lot undergoes rigorous Quality Control (QC) to guarantee exceptional batch-to-batch consistency and high amplification performance.

2. CHARACTERISTICS

- All-in-One System : Contains RTase, RNase inhibitor, i-StarTaq™ DNA Polymerase, dNTP mixture, and a tracking dye in a single pre-aliquoted tube for maximum convenience and reproducibility.
- Direct Gel Loading : Includes a built-in gel loading buffer, allowing direct sample loading onto agarose electrophoresis gels without any additional post-PCR treatment.
- Versatile Applications : Highly suitable for Standard RT-PCR, high-throughput routine screening, gene expression analysis, and direct electrophoresis workflows.

3. KIT CONTENTS AND STORAGE

Contents	25131
Maxime™ RT-PCR PreMix	12 Strips/pk (96 Tube)

- Storage Condition : Store strictly at -20°C immediately upon receipt.
- Shelf Life & Stability : Guaranteed to maintain stable performance through the indicated Expiration Date when stored and handled under recommended conditions.

4. CONSIDERATIONS BEFORE USE

- Research Use Only (RUO) : For research use only. Not for diagnostic or clinical procedures.
- Storage & Handling : Store strictly at -20°C. Avoid repeated freeze-thaw cycles.
- Contamination Control : Use clean gloves and filter pipette tips to prevent cross-contamination.
- PreMix Dissolution : Ensure complete pellet dissolution; briefly spin down if necessary prior to use.
- Template Integrity : Use high-purity RNA free of inhibitors (phenol, ethanol, EDTA, genomic contaminants).

5. PROTOCOLS

1) Prepare the reaction mixture by adding components into the pre-aliquoted PCR tube as follows :

⚠ - Template RNA : 1 ~ 2 µl (Recommended : 0.05~1 ug)
- Forward Primer (10 pmol/µl) : 1 µl
- Reverse Primer (10 pmol/µl) : 1 µl
- Sterile Distilled Water (D.W.) : 16~17 µl (final vol : 20 µl)

⚠ NOTE : Since the PreMix already contains enzyme and buffer components, adjust the volume of distilled water according to the template and primer volumes.

2) Dissolve the blue pellet by pipetting.

⚠ NOTE : If the mixture lets stand at RT for 1-2min after adding water, the pellet is easily dissolved.

3) Perform PCR of samples.

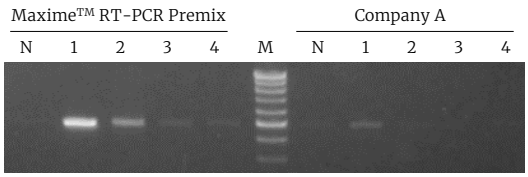
[SUGGESTED CYCLING PARAMETERS]

Tube		Temp.	Time
Reverse transcription		45°C	30min
RTase inactivation		94°C	5min
25-40 Cycles	Denaturation	94°C	20-60sec
	Annealing	45-68°C	20-60sec
	Extension	72°C	1min/kb
Final extension		72°C	Optional. Normally 5min

4) Load samples on agarose gel without adding a loading-dye buffer and perform electrophoresis.

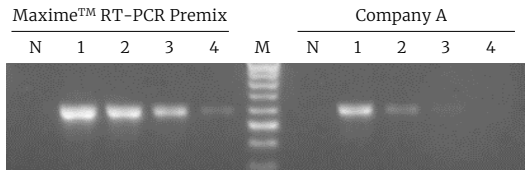
6. EXPERIMENTAL INFORMATION

1) Amplification of 350bp DNA Fragment (IBDV Amplification Test)
$10^{6.0}EID_{50}$ /0.1ml of fluid were 10-fold diluted, and total RNA was isolated using Viral Gene-spin™ Viral DNA/RNA Extraction Kit (Cat. No. 17151). RT-PCR was then performed using Maxime™ RT-PCR PreMix Kit and company A's RT-PCR PreMix Kit.



Lane M, SiZer-100 DNA Marker; lane 1, 10^{-5} dilution; lane 2, 10^{-6} dilution; lane 3, 10^{-7} dilution; lane 4, 10^{-8} dilution; lane N, Negative control

2) Amplification of 570 bp DNA Fragment (GAPDH RT-PCR Test)
Total RNA was purified from mouse cells using easy-BLUE™ Total RNA Extraction Kit (Cat. No. 17061), followed by cDNA synthesis using Power cDNA Synthesis Kit (Cat. No. 25011) and Maxime™ RT PreMix Kit. The diluted cDNA was then amplified using Maxime PCR PreMix Kit.



Lane M, SiZer-100 DNA Marker; lane 1, cDNA from 2ng total RNA; lane 2, cDNA from 200pg total RNA; lane 3, cDNA from 20pg total RNA; lane 4, cDNA from 2pg total RNA; lane N, Negative control