AccuPower® PRRS virus RT-PCR Kit

[Cat. No.] K-2901

Introduction

AccuPower® PRRS virus RT-PCR Kit is a ready-to-use premix for RT-PCR that can be used to detect Porcine reproductive and respiratory syndrome (PRRS) virus.
PRRS virus is the causative agent of swine genital and respiratory syndrome. It is transferred by breeding infected pigs and results in reproductive disorders. This includes late miscarriage and preterm birth. In worst cases, it can even lead to death. In the Republic of Korea, porcine reproductive and respiratory syndrome is listed as Class III domestic animal infectious disease, which indicates that it has potential to cause large economic loss to the livestock industry. This product contains vacuum-dried components specific to PRRS virus including *RocketScript*™ Reverse transcriptase, DNA polymerase, primers, dNTPs, and reaction buffer required for RT-PCR. This ready-to-use kit simplifies preparation of RT-PCR mixture as the user only has to add template RNA and nuclease-free water. After the reaction, since tracking dye is included, the samples can be applied directly on agarose gel for analysis without adding extra solution.

Features & Benefits

- Convenience & Reproducibility: All reactants necessary for RT-PCR including primers are lyophilized in each PCR tube, providing reproducible results in a convenient way.
- Sensitivity: By applying the patented PyroHotStart (Enzyme-mediated HotStart) technology that minimizes non-specific reactions and maximizes reaction efficiency, only the target gene can be effectively amplified even with a trace amount of template RNA.
- Thermal stability: Synthesizes complex RNA into cDNA by applying *RocketScript*™ Reverse transcriptase with excellent thermal stability where it is active even at 70°C.
- Stability: Included stabilizer in the RT-PCR reaction mixture provides increased stability compared to solution-type products.

Composition

Composition	20 µl reaction
RocketScript™ Reverse transcriptase	2 U
Taq DNA Polymerase	1 U
Pfu DNA Polymerase	0.1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 300 µM
Reaction buffer with 1.5 mM $MgCl_2$	1X
Stabilizer and tracking dye	O
PRRSV (ORF-7) Forward primer	0.5 µM
PRRSV (ORF-7) Reverse primer	0.5 µM

*** Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

Specifications

ProFi Taq DNA Polymerase	
5'→3' exonuclease activity	Yes
3'→5' exonuclease activity	Yes
3'–A overhang	Yes
Fragment size	398 bp

Storage

Store at -20°C. If stored in the recommended temperature, this product will be stable until the expiration date printed out on the label.

Online Resources

English

Visit our **product page** for additional information and protocols

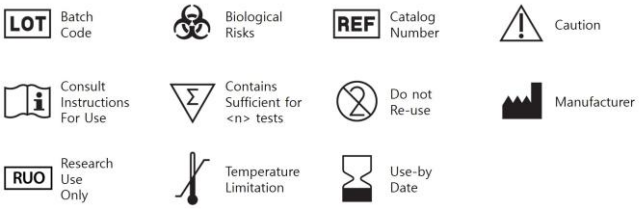
Ordering Information

Description	Cat. No.
AccuPower® PRRS virus RT-PCR Kit, 0.2 ml thin-wall 8-tube strips with attached cap / 96 tubes	K-2901

Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols

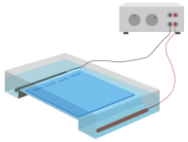


Experimental Procedures

Steps		Procedure Details
1	 **Add template RNA**	1. After preparing the template RNA and nuclease-free water, add the template RNA to the *AccuPower*® PRRS virus RT-PCR Kit.
2	 **Preparation of reaction mixture**	2. Add nuclease-free water into PCR tubes to make a total volume of 20 µl. (Do not include the volume of the dried premix in the PCR tubes.) 3. Completely dissolve the vacuum-dried pellet by vortexing, and briefly spin down.
3	 **Incubate reactions in a thermal cycler**	4. Place PCR tubes on the thermal cycler. 5. Perform the reaction under the following conditions.

Step	Temperature	Time	Cycles
Reverse transcription	50°C	30 min	1 cycle
Pre-denaturation	95°C	15 min	1 cycle
Denaturation	94°C	30 sec	
Annealing	55°C	30 sec	35 cycles
Extension	72°C	40 sec	
Final extension	72°C	10 min	1 cycle

* **Note:** Users can adjust the protocol according to their instrument and template sequences to get optimal results.

4	 **Analyze with gel electrophoresis**	6. After the reaction, maintain the reaction mixture at 4-8°C. 7. Load samples on agarose gel without adding a loading-dye mixture, and perform gel electrophoresis for analysis.