AccuPower® Neospora caninum PCR Kit

[Cat. No.] K-2900

Introduction

AccuPower® Neospora caninum PCR Kit is a ready-to-use premix for PCR that can be used to detect *Neospora caninum* (*N. caninum*), which causes neosporosis in cattle.
N. caninum is a parasitic protozoan that causes neosporosis in dogs and cattle. It is one of the causes of miscarriage or stillbirth. Neosporosis is not transmitted by direct contact, but by feeding food or water contaminated with animal feces containing its eggs (Oocyst; *Neospora caninum*). Neosporosis can get infected via vertical transmission, where the infected mother cow transfers its diseases to its offspring. No vaccine or treatment is currently available. It must be controlled by taking preventative measures and conducting diagnostic tests.
This product contains vacuum-dried components specific to *N. caninum* including DNA polymerase, primers, dNTPs, and reaction buffer required for PCR. This ready-to-use kit simplifies preparation of PCR mixture as the user only has to add template DNA 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 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 DNA.
- Stability: Included stabilizer in the PCR reaction mixture provides increased stability compared to solution-type products.

Composition

Composition	20 µl reaction
Top DNA Polymerase	1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 250 µM
Reaction buffer with 1.5 mM $MgCl_2$	1X
Stabilizer and tracking dye	O
Neo NC Forward primer	0.5 µM
Neo NC Reverse primer	0.5 µM

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

Specifications

Top DNA Polymerase	
5'→3' exonuclease activity	No
3'→5' exonuclease activity	No
3'–A overhang	Yes
Fragment size	350 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

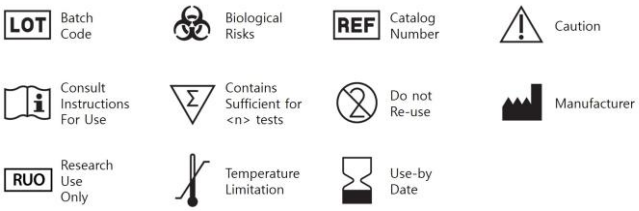
Ordering Information

Description	Cat. No.
AccuPower® Neospora caninum PCR Kit, 0.2 ml thin-wall 8-tube strips with attached cap / 96 tubes	K-2900

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

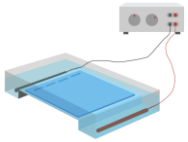


Experimental Procedures

Steps		Procedure Details
1	 **Add template DNA**	1. After preparing the template DNA and nuclease-free water, add the template DNA to the *AccuPower*® Neospora caninum 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
Pre-denaturation	92°C	5 min	1 cycle
Denaturation	92°C	30 sec	
Annealing	57°C	30 sec	45 cycles
Extension	72°C	30 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.