

## 1. DESCRIPTION

Several *Mycoplasma spp.* have been isolated from avian hosts; *M. gallisepticum* (MG), *M. iowae*, *M. meleagridis* and *M. synoviae* (MS) are the most important. Mycoplasmas are fastidious bacteria 0.3~0.8µm in diameter; they lack a cell wall and require a rich growth medium containing serum. Each has distinctive epidemiological and pathological characteristics. MG infection is commonly designated as chronic respiratory disease in chickens and infectious sinusitis in turkeys. Infection may also occur in pheasants, chukar partridges, and peafowl. Infection in pigeons, quail, ducks, geese, and psittacine birds should be considered. MS was first recognized as an acute to chronic infection of chickens and turkeys that produced an exudative tendonitis and bursitis; it now occurs most frequently as a subclinical infection of the upper respiratory tract. MS infection is also a complication of airsacculitis in association with Newcastle disease or infectious bronchitis.

VetPCR™ MYC.GALL Detection Kit is the direct detection of *Mycoplasma gallisepticum* on the basis of a genetic database, so it can diagnose very fast and accurately. It can amplify only specific gene using the PCR (Polymerase Chain Reaction) method, and take only 3 hours for detection. Therefore, it is a very fast, accurate and reliable technique.

## 2. STORAGE

The components of VetPCR™ MYC.GALL Detection Kit should be stored at -20°C. Under this condition, the kit is stable until expiration date stated on the label.

## 3. CONTENTS

	Kit 48	Kit 96	
VetPCR™ MYC.GALL PCR Pre-mixture .....	48	96	tubes
DNase/RNase-free water .....	1	1	vial
MYC.GALL PCR Positive control .....	1	1	vial
MYC.GALL PCR Positive control Pre-mixture .....	4	8	tubes
Brig™ Molecular Weight marker .....	1	1	vial
Mineral Oil .....	1	1	vial
DNA purification kit (see step 6.1) .....	50	100	tests

## 4. SPECIMEN

Tracheal swab.

## 5. ADDITIONAL REQUIRED MATERIALS

- Disposable gloves
- Pipettes
- Sterile pipette tip
- Vortex mixer
- Centrifuge for microcentrifuge tubes
- Thermal cycler
- Electrophoresis kit
- UV transilluminator

## 6. PROCEDURE

Please read through the entire procedure before starting.

### 6.1 DNA PREPARATION

Various manufacturers offer DNA isolation kits. Please carry out the DNA isolation according to the manufacturers instructions. The following standard DNA Purification kit is recommended.

Product	Catalog No.	Manufacturer
Bioingentech™ Genomic DNA Purification Kit (50 test)	230040(50)	Bioingentech Biotechnology Inc.
Bioingentech™ Genomic DNA Purification Kit (100 test)	230040(100)	Bioingentech Biotechnology Inc.

### 6.2 AMPLIFICATION

- 1.- Prepare appropriate PCR Premix tubes and one PCR Premix tube for Positive control. Label.
- 2.- Add 6µl of DNase/RNase-free water into the PCR Premix tube to total volume as 11µl.
- 3.- Add 2µl of template DNA into the PCR Premix tube to total volume as 13µl.
- 4.- Add 6µl of DNase/RNase-free water and 2µl of PCR Positive control into a PCR Positive control Premix tube for monitoring of amplification and easy interpretation.
- 5.- Add mineral oil (11µl). This step is necessary, even when using a thermal cycler that employs a top heating method.
- 6.- Perform PCR reaction of samples as the below process, using a PCR thermal cycler.

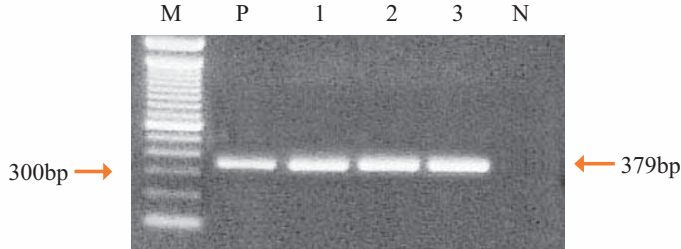
PCR cycle		Temp.	Time
1 Cycle	Initial Denaturation	94°C	2 min.
	Denaturation	94°C	30 sec.
	Annealing	55°C	30 sec.
30 Cycles	Extension	72°C	30 sec.
	Final extension	72°C	5 min.

### 6.3 DETECTION OF AMPLIFIED PRODUCTS

- 1.- Prepare 1.5% agarose gel containing Ethidium bromide (Et-Br).
- 2.- Load 7µl of PCR product, 7µl of positive control and 2µl of Brig™ Molecular Weight marker on agarose gel without adding a loading-dye buffer and perform electrophoresis.
- 3.- Run electrophoresis by 100V (required about 30~40 minutes).
- 4.- Identify the result on ultra-violet (UV) transilluminator.

## 6.4 INTERPRETATION

- Expected PCR product size : 379 bp



**Fig1.** Electrophoresis of PCR product by VetPCR™ MYC.GALL Detection Kit  
 Lane M : Brig™ Molecular Weight Marker (Bioingentech Ltd.)  
 Lane P : Positive control  
 Lane 1~3 : MYC.GALL Positive sample  
 Lane N : Negative control

## 7. NOTICE

- For research purpose only. Not for use in diagnostic procedures for clinical purposes. *For in Vitro Use Only.*
- Take care in handling of specimen to minimize risk of infection.
- The PCR process is covered by patents issued and applicable in certain countries. Bioingentech Biotechnology Inc. does not encourage or support the unauthorized or unlicensed use of the PCR process. Use of this product is recommended for persons that either have a license to perform PCR or are not required to obtain a license.

## 8. TROUBLE SHOOTING

- 1.- In the case of difficult to interpret results due to non-specific bands; reduce amount of template by 1/10 dilution, heated at 65° C for 5 min. and reacts again.
- 2.- Preparation of PCR reaction at room temperature may cause the non-specific band.
- 3.- All procedure should be carried out on ice.

## 9. ORDERING INFORMATION

Product	Catalog No.
VetPCR™ MYC.GALL Detection Kit 48	VET0013A(48)
VetPCR™ MYC.GALL Detection Kit 96	VET0013A(96)
Brig™ Molecular Weight Marker	24012



**Bioingentech Ltd.**

Salas 350, piso 2, Concepción, Chile  
 Telephone (56)-(41)-2790435  
 Fax (56)-(41)-2790435  
 info@bioingentech.com  
 www.bioingentech.com

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