Biogal – Galed Labs.
Kibbutz Galed, 19240, Israel
Tel: 972-4-9898605 · Fax: 972-4-9898690
E-mail: info@biogal.co.il · Site: www.biogal.co.il

Product Information

Name of Kit: **ImmunoComb Feline Coronavirus (FCoV) [FIP] Antibody Test Kit**

Catalog No: 50FFP201/ 50FFP210

No of Tests: 12 (Standard-size Kit)/ 120 (Lab-size Kit)

Intended Use: The ImmunoComb Feline Coronavirus (FCoV) Antibody Test Kit is designed for measuring serum IgG antibody levels to FCoV in cats, to monitor FCoV infections and assist in the diagnosis of Feline Infectious Peritonitis (FIP). The kit is intended for detecting antibody levels in plasma, serum or whole blood. In addition, this kit should detect serum IgG antibody levels with effusion (peritoneal fluid) as well, according to Addie (2014)

Diagnostic Method: The ImmunoComb test is based on solid phase "dot"-ELISA technology. FCoV antigen is applied to the lowest spot on a comb-shaped plastic card. (The Comb is the solid phase and has 12 teeth-sufficient for 12 test samples.)

The samples to be tested are mixed with diluent in the first row of wells of a multi-chamber developing plate. The Comb is then incubated with the samples in the developing plate. Specific IgG antibodies from the samples, if present, bind to the antigen at the test spots. The top spot is a positive reference control and the lower spot is the test spot.

The Comb is then transferred to a well, where unbound antibodies are washed from the antigen spots. In the next step, the Comb is allowed to react with an anti-cat IgG Alkaline Phosphates conjugate, which will bind to antigen-antibody complexes at the test spots. After 2 more washes, the Comb is moved into the last well, where a color result develops via an enzymatic reaction. The intensity of the color result of test spots corresponds directly to the antibody level in the test sample.

Specificity:	100%
Sensitivity:	100%

Performance Data are based on Dr. Diane D Addie's study (2014)

Characteristics: Five desirable qualities characterize the ImmunoComb FCoV antibody test: high sensitivity; high specificity; a requirement for a small quantity of sample; the ability to use plasma, serum or whole blood as well as effusion; and the sensitivity of the test in the presence of virus. In addition, two other qualities of the kit for the purpose of screening cats are: the speed of the result and the determination of an antibody titre (Addie, D. D., 2014).

Pathophysiology: Up to 70% of cats, worldwide, are exposed to Feline Coronaviruses (FCoV). Infection is transmitted by fecal-oral route; the virus can survive in dried secretions for as long as seven weeks. The risk of infection is higher in catteries and multiple-cat households.

FCoV infection is asymptomatic in the majority of cats. In a small percentage of cases, mild signs such as fever, diarrhea and conjunctivitis can occur. This stage may last for an undefined period and then progress to a severe systemic disease, known as Feline Infectious Peritonitis (FIP). Cats of any age or breed may develop FIP. The disease is most often seen in young (less than 2 years old) pedigrees; many of them have a history of recent stress, such as relocation to a new home, surgery (e.g. neutering) or another illness.

Preferred Method of Diagnosis: Serology (measuring serum antibody levels) is the preferred method for monitoring FCoV infections and may help in the diagnosis of FIP when used together with other clinic pathological data.

Main Applications:

(1) Cats with FIP typically have high levels of anti FCoV antibodies. Therefore, a sero-negative result to FCoV in an ill cat helps rule out the diagnosis of FIP.
(2) FCoV antibody testing may be used to screen for the presence of FCoV infections in cats before they are introduced into FCoV-free households or catteries.

Interpretation: The level of antibodies (i.e., antibody titer) is determined according to the intensity of the test color result. Thus, no or a very light gray color indicates no (negative) or none specific reaction, medium weak results indicates low level of antibodies and higher levels of antibodies are indicated by darker color results. For the ImmunoComb® Feline Coronavirus Antibody Test Kit a reference spot on each Comb tooth (top spot) has been calibrated to develop a distinct gray color. This is the same color that is generated by a medium positive result, which is considered to be the 'cut-off' value of a significant antibody titer.

CombScale Value	Result	Comments
0	Negative	Rules out infection by and shedding of FCoV.
1	Negative	Rules out infection by and shedding of FCoV. Very low reactivity may be non-specific result
2	Low positive	Possible early or convalescent stage of FCoV infection;.
3-4	Medium positive	Indicates previous or current FCoV infection.
5-6	High positive	Indicates FCoV infection with high risk for shedding virus; consistent with diagnosis of FIP.

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