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Product Information (30.10.07)

Name of Kit: **ImmunoComb® Canine Parvo & Distemper IgM Antibody Test Kit**

Catalog No: 55CPD201/55CPD210

No of Tests: Standard Size: 12 samples X 2 antigens = 24 Tests
Lab Size: 120 samples X 2 antigens = 240 Tests

Intended Use: The ImmunoComb® Parvo and Distemper Test Kit is intended to evaluate the IgM antibody response to vaccination or infection by Canine Parvovirus (CPV) and Distemper Virus (CDV). A high antibody level is associated with immunity to infection (in well dogs) and is helpful for diagnosis of clinical cases.

Diagnostic Method: The ImmunoComb® test is based on solid phase "dot"-ELISA technology. Antigens are applied to test 'spots' on the solid phase, which is a comb-shaped plastic card. (The Comb has 12 teeth-sufficient for 12 test samples.)

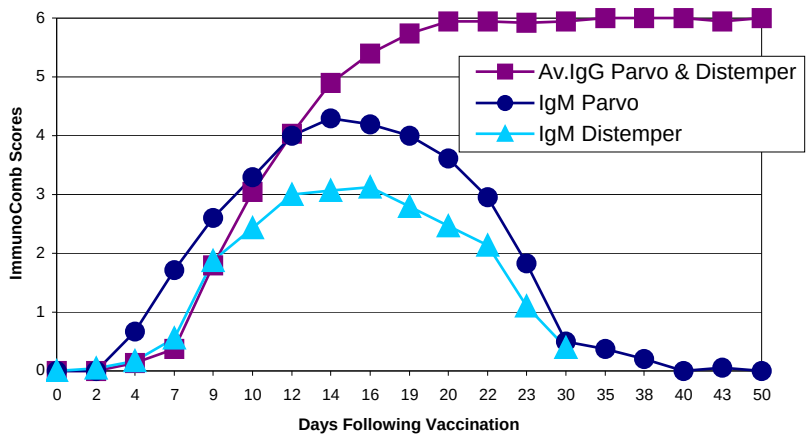
The samples to be tested are mixed with diluent in the first row of wells of a multi-chamber developing plate. The test spots on the Comb are then incubated with the samples in the developing plate. Specific IgM antibodies from the samples, if present, bind to the antigens at the test spots.

The Comb is then transferred to a well, where unbound antibodies are washed from the antigens spots. In the next step, the Comb is allowed to react with an anti-dog IgM Alkaline Phosphates conjugate, which will bind to antigen-antibody complexes at the test spots. After 2 more washes, the Comb is moved to 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.

Parvovirus (IgM):	**Specificity:** 90.8%	**Sensitivity:** 91.4%
Distemper (IgM):	**Specificity:** 95.5%	**Sensitivity:** 93.1%

Immunology: Serology can provide the veterinarian with information about the dog's immune status regarding previous vaccination or infection by particular disease agents. The humoral immune response is largely composed of 2 classes of antibodies, IgM and IgG. In immunocompetent dogs, IgM antibodies are initially produced in response to infection or following vaccination. The presence of elevated levels of IgM antibodies is short lived. As such, high IgM titers indicate recent exposure (or vaccination) to CDV and/or CPV (See Fig. 1).

Fig. 1. Levels of IgG and IgM in Days Following Vaccination



Interpretation: The level of antibodies (i.e., antibody titer) is determined according to the intensity of the test color result. For the ImmunoComb® Parvo & Distemper IgM Antibody Test Kit a reference spot is provided on each Comb tooth (top spot), which has been calibrated to develop a distinct gray color. This is the same color that is generated by a high positive result.

Thus, a color result that is equal to or darker than the reference spot is considered positive. A faint color result of less than S1 is considered an inconclusive result and should be scored 'suspicious'. A darker color result, greater than S1, indicates positive IgM reaction to CPV and/ or CDV. Please refer to Table 1.

Table 1. Interpretation of Results

IC Score	Color Result	Interpretation	Recommendations
0	White or trace of gray	No detectable antibodies to CDV and/or CPV.	Consider another diagnosis. Retest in 3-5 days.
1	Faint gray	Low antibody titer; may be early immune response or non-specific reaction.	Retest in 2-5 days. Consider another diagnosis.
>2	Distinct gray	Immune response due to recent exposure or vaccination to CDV and /or CPV.	Consider diagnosis by testing a convalescent sample for IgG antibodies in 5-7 days.*

* A parallel kit is available; Biogal's ImmunoComb® Parvovirus & Distemper IgG Antibody Test Kit.

Main Application: Provides information about recent exposure to Parvovirus and Distemper viral antigens (within the previous 3-4 weeks).

Other Diagnostic Methods:

a) Hematology/ Blood chemistry – Routine hematologic tests (such as CBC) are helpful when abnormal results are present (e.g., lymphopenia), however, these tests are not specific for individual disease.
b) Antigen Detection – Immunoflourescence, Fecal antigen, PCR.
c) Other serologic methods – IFA, HI, VN.

References:

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