

In-house Antibody Titer Testing

Dr. Sandra Newbury discusses two in-house antibody titer tests that help quickly assess the risk of CPV and CDV infection for shelter dogs: TiterChek and the VacciCheck ImmunoComb.

In the face of an outbreak, using antibody titers in healthy dogs who may have been exposed to viruses is an important part of assessing risk. Titers are particularly important during outbreaks of infections with [canine parvovirus \(CPV\)](#) or [canine distemper virus \(CDV\)](#). Titers can be sent out to labs but turnaround time can be a problem when you really want to have some answers right away.

[TiterChek®](#), from Zoetis, is designed to be used to test for canine distemper virus (CDV) or canine parvo virus (CPV) antibodies in canine serum. We have posted a fair amount of information about this kit and found it really helpful for several years. Shelters can usually get it delivered overnight and when the tests are run in-house, you can get the answers the same day, often in a matter of minutes. The results are compared to positive and negative control wells and give non-quantitative positive or negative results. The TiterChek kit is a well test; each time the test is run two additional wells must be used to run a positive and negative control. So, the test is most economical when you are running several tests at once.

In 2011, another new in-house option came on the market in the US, the [VacciCheck ImmunoComb](#) test by Biogal. The VacciCheck® kit provides semi-quantitative antibody titer levels for CPV and CDV (and canine adenovirus). The kit was designed to test for adequate response after vaccination with core vaccines. The kit is a "self contained" dot ELISA titer test kit, not needing any reagent preparation. The kit looks, not surprisingly, like a flat comb; each tooth of the comb is a test for an individual dog and includes the positive and negative controls. Results can be scored by their shade relative to the positive on a scale from 1-6. Results develop for all three viruses on the same comb simultaneously. The test provides results within about 20 minutes. We have used the VacciCheck for shelters and found it to be really helpful.

While assigning risk groups never gives an absolute guarantee of whether a particular animal will become infected or not, defining which animals are at low risk of becoming sick and which are at a higher level of risk helps us make decisions about who we can send safely on their way and who needs more attention. Often, identifying the low risk animals and sending them happily along opens up resources for animals who are more at risk. [Risk assessment](#) can be used to minimize the amount of quarantine,

euthanasia, and other drastic or costly measures taken while still effectively controlling an outbreak. Establishing risk categories for exposed animals also limits the number of dogs who need quarantine, isolation, or special rescue. When the number who would need something special falls only to those who are really at risk, often the situation turns quickly from unimaginable to managed.

Note: a version of this article appeared previously in the Koret Shelter Medicine Program newsletter (Shelter Medicine Times, Vol. 1, Issue 2, September 2011).