

The Simple Guide to Titer Testing Dogs

- Vaccine Articles and News /
- By Jessica Peralta



If you're trying to limit the number of vaccines your dog receives (and you should be), then antibody titers are the perfect solution.

While titers offer many benefits to the vaccine-wary pet owner by showing a measurement of antibody levels to a particular virus in the blood, there are some things to keep in mind when titer testing dogs.

Richard Ford DVM helps break it down for us:

How Titers Work

Veterinary titer tests use the IgG class of immunoglobulin antibody to assess protective immunity to a particular virus, such as parvovirus or distemper. Titers measure antibody levels in the blood through laboratory analysis or by in-clinic antibody test kits. The results come in the form of positive (there are protective levels of the antibody against the virus) or negative (there are not protective levels of antibody against the virus in the blood).

Though positive and negative seems pretty clear-cut, it's not quite that simple ...

Interpreting Results

It's important to understand a negative titer result doesn't necessarily mean your dog isn't protected.

In addition to antibodies (which titer tests measure), your dog's immune system contains memory cells (B-lymphocytes) that stick around much, much longer than antibodies – and probably for the life of the dog. Because of these memory cells, exposure to a virus like distemper or parvovirus can trigger a rapid and protective response against that virus if there's been previous natural exposure or vaccination. The memory cells file away the information from the virus, so it can respond to subsequent exposure before symptoms appear.

“Research has shown that once an animal's titer stabilizes, it is likely to remain constant for many years. Properly immunized animals have sterilizing immunity (immunity that prevents further infection even when an animal is exposed) that not only prevents clinical disease but also prevents infection, and only the presence of antibody can prevent infection,” states Dr Jean Dodds. “Furthermore, protection as indicated by a positive titer result is not likely to suddenly drop off unless an animal develops a severe medical condition or has significant immune dysfunction. It's important to understand that viral vaccines prompt an immune response that lasts much longer than the immune response elicited by contracting the actual virus. Lack of distinction between the two kinds of responses may be why some practitioners think titers can suddenly disappear.”

Other points to keep in mind when interpreting titer results for canine distemper (CDV), canine parvovirus (CPV) and canine adenovirus (CAV) are:

1. **A positive titer test result in an unvaccinated, but healthy dog or cat suggests prior exposure to and recovery from infection. And it means that the dog or cat now has protective immunity.**
2. **A positive titer test result in a previously vaccinated dog or cat correlates well with protective immunity.**
3. **A negative titer test result in a previously vaccinated dog or cat must be interpreted on the basis of age and prior vaccination history. It can mean the animal is protected with the help of memory cells, or it can mean he or she is susceptible to infection. If your dog has had a previous positive titer, then this is a good indication that there are protective memory cells present.**

Saving Money with Titer Tests

An important consideration when considering titer testing for your pet is the type of test used.

Full laboratory titer testing is often costly and might take several days for results.

Fortunately, two companies now offer in-clinic antibody titer test kits to veterinarians that are much more affordable and super quick – you can get results in as little as 15 to 20 minutes.

[TiterCHEK](#), manufactured by Synbiotics Corporation, offers testing for canine distemper and canine parvovirus with results shown as positive or negative. [VacciCheck](#), manufactured by Biogal Galed Laboratories, offers testing for canine adenovirus, canine distemper, canine parvovirus, feline calicivirus (FCV), feline herpesvirus (FHV) and feline parvovirus with results shown as negative, low positive, significant positive or high positive.

Keep in mind that these test kits have been correlated through gold standard lab tests such as virus neutralization (VN) or hemagglutination inhibition (HI), or challenge testing results. (Animal vaccines are licensed based on challenge – considered the only true test of protective immunity – where unvaccinated animals are infected with a virus to manifest clinical illness and

vaccinated animals remain healthy.) This correlation is done in order to be able to accurately represent a defined threshold of antibody.

Today, in-clinic titer test kits for canine distemper, canine parvovirus, canine adenovirus and feline parvovirus correlate well with gold standard tests. So, when these in-clinic tests are performed properly, it means that a positive test result demonstrates the dog or cat does have protective levels of antibody against the virus. But remember, a negative test result does not necessarily define susceptibility to a virus ... the dog's history and age would have to be considered.

Limitations

Rabies antibody titers (determined by fluorescent antibody virus neutralization, or FAVN) are only available through a limited number of certified laboratories. To date, a rabies virus antibody titer cannot be interpreted as an index of immunity in lieu of revaccination.

When to Use Titers

In-clinic titer test kits for canine distemper, canine parvovirus, canine adenovirus and feline parvovirus can be used to avoid unnecessary vaccines, as well as in situations where the vaccine history of the pet is unknown and in shelter situations in order to determine the antibody status of animals to figure out which animals are susceptible and need to be vaccinated and separated.

Antibody titers may be determined as early as two to four weeks following vaccination.

"You should avoid vaccinating animals that are already protected, and titer testing can determine if adequate, effective immunity is present," states Dr Ronald Schultz. "It is often said that the antibody level detected is 'only a snapshot in time.' That's simply not true; it is more a 'motion picture that plays for years.'"

About the Author [Jessica Peralta](#)

Jessica Peralta has been a journalist for over 15 years and an animal lover all her life. She has had dogs, cats, birds, turtles, fish, frogs, and rabbits. Her current children are a German shepherd named Guinness and a black domestic cat called Derby. It's because of them that she decided to become a pet nutritionist and focus her journalistic career on the world of holistic animal care. She loves spending time with them and also learning about all the ways she can make them healthier, the natural way.