

FeLV Ag/FIV Ab Test Kit

Feline Leukemia Virus Ag/ Feline Immunodeficiency Virus Ab Test Kit

AI06



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Catalog number	AI06
Summary	Detection of FeLV p27 antigens and FIV p24 antibodies within 10 minutes
Principle	One-step immunochromatographic assay
Detection Targets	FeLV p27 antigens and FIV p24 antibodies
Sample	Feline Whole Blood, Plasma or Serum
Reading time	5 ~ 10 minutes
Sensitivity	FeLV : 100.0 % vs. IDEXX SNAP FIV/FeLV Combo Test FIV : 100.0 % vs. IDEXX SNAP FIV/FeLV Combo Test
Specificity	FeLV : 100.0 % vs. IDEXX SNAP FIV/FeLV Combo Test FIV : 100.0 % vs. IDEXX SNAP FIV/FeLV Combo Test
Limit of Detection	FeLV : FeLV recombinant protein 200ng/ml FIV : IFA Titer 1/8
Quantity	1 box (kit) = 10 devices (Individual packing)
Contents	Test kit, Buffer bottle, and Disposable droppers
Storage	Room Temperature (at 2 ~ 30°C)
Expiration	24 months after manufacturing
Caution	Use within 10 minutes after opening Use appropriate amount of sample (0.02 ml of a dropper for FeLV/0.01 ml of a dropper for FIV) Use after 15~30 minutes at RT if they are stored under cold circumstances Consider the test results as invalid after 10 minutes

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Information

Feline leukemia virus (FeLV), a retrovirus, so named because of the way it behaves within infected cells. All retroviruses, including feline immunodeficiency virus (FIV) and human immunodeficiency virus (HIV), produce an enzyme, reverse transcriptase, which permits them to insert copies of their own genetic material into that of the cells they have infected. Although related, FeLV and FIV differ in many ways, including their shape: FeLV is more circular while FIV is elongated. The two viruses are also quite different genetically, and their protein constituents are dissimilar in size and composition. Although many of the diseases caused by FeLV and FIV are similar, the specific ways in which they are caused differs.

FeLV-infected cats are found worldwide, but the prevalence of infection varies greatly depending on their age, health, environment, and lifestyle. In the United States, approximately 2 to 3% of all cats are infected with FeLV. Rates rise significantly—13% or more—in cats that are ill, very young, or otherwise at high risk of infection.

Transmission

Cats persistently infected with FeLV serve as sources of infection. Virus is shed in very high quantities in saliva and nasal secretions, but also in urine, feces, and milk from infected cats. Cat-to-cat transfer of virus may occur from a bite wound, during mutual grooming, and (though rarely) through the shared use of litter boxes and feeding dishes. Transmission can also take place from an infected mother cat to her kittens, either before they are born or while they are nursing. FeLV doesn't survive long outside a cat's body probably less than a few hours under normal household conditions.



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Feline Leukemia Virus

Symptoms

During the early stages of infection, it is common for cats to exhibit no signs of disease at all. However, over time-weeks, months, or even years-the cat's health may progressively deteriorate or be characterized by recurrent illness interspersed with periods of relative health. Signs are as follows:

- \checkmark Loss of appetite.
- ✓ Slow but progressive weight loss, followed by severe wasting late in the disease process.
- ✓ Poor coat condition.
- ✓ Enlarged lymph nodes.
- ✓ Persistent fever.
- ✓ Pale gums and other mucus membranes.
- ✓ Inflammation of the gums (gingivitis) and mouth (stomatitis)
 ✓ Infections of the skin, urinary bladder, and upper respiratory tract.
- ✓ Persistent diarrhea.
- ✓ Seizures, behavior changes, and other neurological disorders.
- ✓ A variety of eye conditions, and In unspayed female cats, abortion of kittens or other reproductive failures.

Diagnosis

The preferred initial tests are soluble-antigen tests, such as ELISA and other immunochromatographic tests, that detect free antigen in fluid. Testing for the disease can easily be performed. Soluble-antigen tests are most reliable when serum or plasma, rather than whole blood, is tested. In experimental settings most cats will have positive results with soluble-antigen test within days after exposure; however the time between exposure and 28 development of antigenemia is extremely variable and may be considerably longer in some instances. Tests using saliva or tears yield an unacceptably high percentage of inaccurate results and their use is not recommended. For a feline testing negative for the disease a preventive vaccine can be administered. The vaccine, which is repeated once every year, has an incredibly high success rate and is currently (in the absence of an effective cure) the most potent weapon in the fight against feline leukemia.

Feline Leukemia Virus

Prevention

The most effective way to prevent infection is to prevent exposure to FeLVinfected cats. Testing to identify infected cats is the mainstay of preventing transmission of FeLV. FeLV vaccination should not be considered a substitute for testing cats.

Information

Virologists classify feline immunodeficiency virus (FIV) as a lentivirus (or "slow virus"). FIV is in the same retrovirus family as feline leukemia virus (FeLV), but the viruses differ in many ways including their shape. FIV is elongated, while FeLV is more circular. The two viruses are also quite different genetically, and the proteins that compose them are dissimilar in size and composition. The specific ways in which they cause disease differ, as well.

FIV-infected cats are found worldwide, but the prevalence of infection varies greatly. In the United States, approximately 1.5 to 3 percent of healthy cats are infected with FIV. Rates rise significantly-15 percent or more-in cats that are sick or at high risk of infection. Because biting is the most efficient means of viral transmission, free-roaming, aggressive male cats are the most frequently infected, while cats housed exclusively indoors are much less likely to be infected.

Transmission

The primary mode of FIV transmission is deep bite wounds, whereas FeLV is easily spread by casual contact such as grooming and shared water bowls. Experts disagree as to whether FIV can be spread by casual contact. The virus is also transmitted via mucosal surfaces such as those in the mouth, rectum, and vagina.

Symptoms

Early in the course of infection, the virus is carried to nearby lymph nodes, where it reproduces in white blood cells known as T-lymphocytes. The virus then spreads to other lymph nodes throughout the body, resulting in a generalized but usually temporary enlargement of the lymph nodes, often accompanied by fever. This stage of infection may pass unnoticed unless the lymph nodes are greatly enlarged.

An infected cat's health may deteriorate progressively or be characterized by recurrent illness interspersed with periods of relative health. Sometimes not appearing for years after infection, signs of immunodeficiency can appear anywhere throughout the body. Signs are as follows:

- ✓ Poor coat condition and persistent fever with a loss of appetite are commonly seen.
- ✓ Inflammation of the gums (gingivitis) and mouth (stomatitis) and chronic or recurrent infections of the skin, urinary bladder, and upper respiratory tract are often present.
- ✓ Persistent diarrhea can also be a problem, as can a variety of eye conditions.
- ✓ Slow but progressive weight loss is common, followed by severe wasting late in the disease process.
- ✓ Various kinds of cancer and blood diseases are much more common in cats infected with FIV, too.
- ✓ In unspayed female cats, abortion of kittens or other reproductive failures have been noted.
- ✓ Some infected cats experience seizures, behavior changes, and other neurological disorders.

Diagnosis

Diagnosis is based on the history, the clinical signs, and the result of an FIV antibody test. Detection of FIV antibody is the diagnostic test of choice, because the levels of virus in the blood of an infected cat are frequently so low as to be undetectable by conventional means. Currently available FIV tests (ELISA, Western blot test, and other immunochormatographic test) detects antibodies directed against the virus. Most cats develop antibodies to FIV within 60 days after infection. However, the time required for seroconversion is extremely variable and may be considerably longer than 60 days in some instances. A positive FIV antibody test indicates that a cat is infected with FIV (probably for its lifetime-established infections are rarely cleared) and is capable of transmitting the virus to other susceptible cats. it should be noted that eight to twelve weeks (and occasionally more) may elapse after infection before detectable antibody levels appear.

Some researchers caution that disease pathogenesis, such as regressive infections and lack of circulating p27 antigen in some cats with FeLV infection, can complicate accurate diagnosis. Further, the use of FIV vaccines may also complicate accurate point-of-care testing because distinction between infection-induced versus vaccine-induced antibodies is difficult

Prevention

The only sure way to protect cats is to prevent their exposure to the virus. Cat bites are the major way infection is transmitted, so keeping cats indoorsand away from potentially infected cats that might bite them-markedly reduces their likelihood of contracting FIV infection. For the safety of the resident cats, only infection-free cats should be adopted into a household with uninfected cats.

Vaccines to help protect against FIV infection are now available. However, not all vaccinated cats will be protected by the vaccine, so preventing exposure will remain important, even for vaccinated pets. In addition, vaccination may have an impact on future FIV test results. It is important that you discuss the advantages and disadvantages of vaccination with your veterinarian to help you decide whether FIV vaccines should be administered to your cat.