Ringbio
food and animal diagnostic company

Mink Aleutian Disease Antibody Test Kit

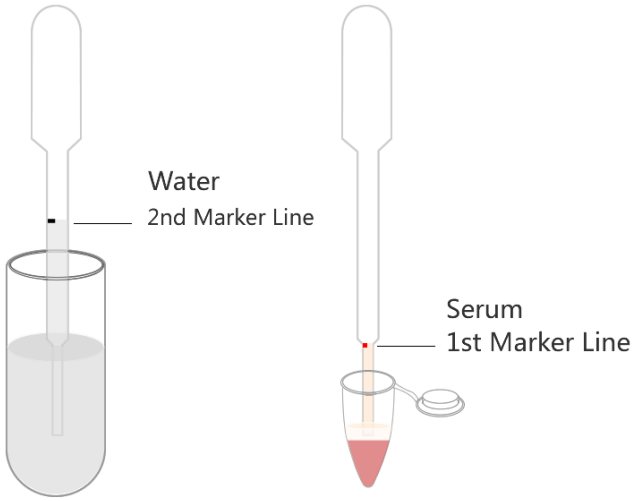
Product Number: **AB1001**

Total test time just 5min

No special instrument required.

Low Cost

High Sensitivity



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Mink Aleutian Disease Antibody (ADV-Ab)

Rapid Test Kit

Product #: AB1001

This product is only for research and screening use. For any suspicious result, please further confirm with CIE or ELISA, or further consult with your veterinarian.

Before Test

- Check the validation and expiry information of the kit; make sure the kits are valid and stored properly before use.
- If the package is broken or damaged before use, please do not use. Contact your supplier and see if it is usable.
- The sample and sample tube shall be handled properly. All used strips shall be collected according to local regulations.
- Take the strip out from the package according to your requirement and use for test immediately.
- Do not open the plastic container before use.
- This test strip is used for only once, do not use repeatedly.

1. Introduction

ADV is short for Aleutian disease virus, the pathogen that causes the severe chronic disease in mink and ferret, etc., causing significant decrease in the host growth and reproduction performance. Serology testing is currently the valid methodology for the diagnosis of ADV infection, i.e., ELISA and Counter immune electrophoresis, etc. Due to the deficiency of time-consuming, complicated operation and expensive facilities, farmers and researchers are looking for new ways to simplify the work. Rapid test strip, also known as lateral flow test strip, is the newly developed technology to solve the current problem of ADV diagnosis.

2. Principle

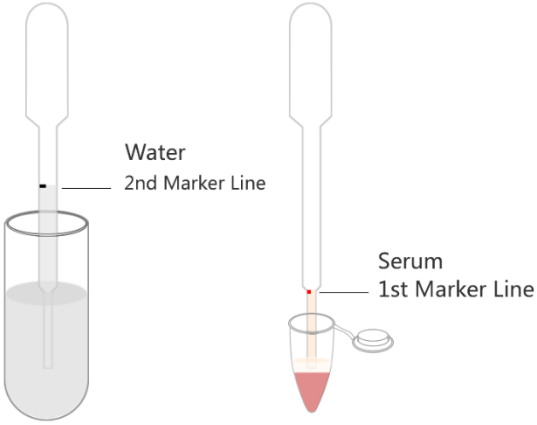
This current test is based on immnunochromatographic assay, in which double antibody sandwich immunoassay is employed. There are two Lines (Line C and Line T) on the test strip. Line C is coated with secondary antibody, which will recognize Mink/Ferret IgG and always appear. Colloid gold conjugated antigen A (coated on a membrane) will recognize the ADV antibody in the serum or blood and then the other antigen B will capture the antigen A-antibody complex on the Line T, then a positive result is out with 2 lines on the strip. If Line T is invisible, the result will be negative. If Line T is weaker than Line C, a weak positive result will be obtained.

3. Kit Components

ADV Ab Test Strip .....96pcs Plastic Pipet.....96pcs
Microwell reagent.....96pcs Microwell holder.....1pc
Kit instruction.....1 pc

4. Sample preparation

4.1 Collect 0.5mL-1mL blood from the target animal. Use the serum for testing after it is separated.
4.2 If the serum sample solution cannot be tested immediately, please store at 4°C for no more than 4 hours.



5. Assay Steps

5.1 Take needed strips, microwells from the package and use them for testing within 1 hour.

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5.2 Take 90ul purified water (or distilled water, or purified bottle water) into the microwell.

Note: **Micropipette** is recommended to take the liquid for testing. If you use the plastic pipette in the kit, the liquid shall be collected to the **Second MAERKER** on the pipette.

5.3 Take 10ul serum sample into the microwell.

Note: **Micropipette** is recommended to take the liquid for testing. If you use the plastic pipette in the kit, the liquid shall be collected to the **First MAERKER** on the pipette.

Note: if the sample tube is stored at 4°C, please take out and bring to room temperature before testing, for example, keep the sample at room temperature for at least 30min.

5.4 Mix the sample, water and the reagent in the microwell use the plastic pipette or micropipette by repeated absorbing up and pushing down for 3 times. Insert the test strip with the MAX END into the mixed liquid, and then keep at room temperature for 5min.

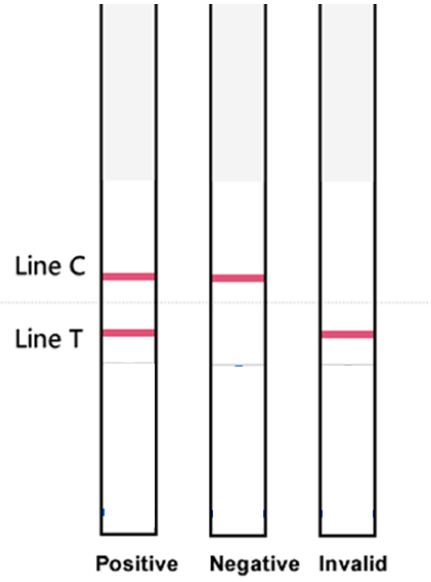
5.5 Take out the strip, cut off the wet MAX END, and determine the result according to Part 6.

6. Result Determination

There are two lines on the strip, Line C for Control Line, Line T for Test Line.

NEGATIVE (-): Line C is visible, and Line T is not visible.

POSITIVE (+): Line C is visible and Line T is visible. A strong color of Line T indicates strong positive, and weak Line T means weak positive.



7. Special notice

7.1 Read the kit instruction carefully before use.

7.2 Use the strip within 30min after taking out from the plastic package.

7.3 The test strip can be used for only once, do not use repeatedly.

7.4 The test result is for reference, suspicious result may need further confirmation with ELISA or CIE.

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Diagnostics of Aleutian Disease and Herd Management in Mink

Introduction

Aleutian Disease (also ADV, for Aleutian Disease Virus) or Mink Plasmacytosis is caused by a highly contagious parvovirus (Carnivore amdoparvovirus) affecting mustelids, causing spontaneous abortion and death in minks and ferrets. ADV is considered as the most important disease in mink and ferrets, and yet there is currently no good treatment for it.

ADV is highly contagious. It is transferred through a ferret's bodily fluids, and it can lie dormant in dried urine or on an owner's clothes and shoes for up to two years. Known cases of ADV positive ferrets should not be taken to places where they may come in contact with other ferrets. They also should not be allowed to run on floors or other areas where uninfected ferrets or their owners may come in contact with residual traces of the virus from the infected animals.

Infection

Major source of infection	**ADV infected or latent mink**
Route of infection	Horizontal transmission: feed, water, feeding facility, mosquito, etc. vertical transmission: from female to offspring
Characteristics of infection	Seasonal disease, high in autumn and winter. Most infected animal will be carrier of the virus and fewer may have acute symptoms.
Result of infection	Abortion, weak and dead fetus. Infected animal may also experience long term chronic wasting.

Diagnostics

Reference method	**CIE (counterimmunoelectrophoresis): to test the antibody in serum, rapid, low sensitivity and time consuming and lower cost**
Rapid method	Rapid test kit, also known as lateral flow immunoassay, to test the antibody in serum, low cost, no special instrument, no special training.
Other method	Real-time PCR to test antigen / virus. Need PCR instrument and special training. Complicated operation

Herd management after diagnosis

General strategy: grouping feeding + gradually elimination

Step 1	**diagnostics**	**Use the rapid test kit from ringbio to test all herd, check and record the result. Negative, weak positive, positive, strong positive result shall be grouped.**
Step 2	grouping	According to the test result and animal group, try to separate the different group into different feeding area. Sterilizing, cleaning and rearrange the cages.
Step 3	stepwise elimination	First to eliminate the strong positive animal, and then to eliminate the positive animal. Weak positive shall be treated with caution. Negative ones shall be treated carefully and try to keep up the good result.
Routine checking		Check the herd status every certain period. For example, one month or according to the animal health status. Run the grouping and elimination steps gradually. Finally the infection will be eradicated.

ADV tolerant breeding

This is a new trend for mink breeding, to select ADV-tolerant individuals from the herd and establish such desired breeds. More information can be found on publications from Prof. AH Farid, Dalhousie University.

References

1. https://en.wikipedia.org/wiki/Aleutian_Disease

2. EFBA fact sheets

3. Dr. Mogen Hansen, Aleutian disease eradication in Denmark