

User's Manual

Feline Coronavirus Antibody SRE

An SRE to detect antibodies against Feline Coronavirus in serum, plasma and ascetic fluid.

REF F3205-AB02

Σ 32

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Please use only the valid version of the package insert provided with the kit.

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2. Introduction

Feline Infectious Peritonitis (FIP) is an important and complex disease of both wild and domestic cats induced by a coronavirus. The great majorities of cats that become infected recover completely and develop immunity to coronavirus. Some of the recovered cats become carriers of the virus and can infect other cats. A few infected cats do not build up effective immunity to coronavirus and the disease progresses to a fatal form. The fatal, disseminated form of FIP is a chronic, progressive disease characterized by antibiotic-resistant fever, weakness, loss of appetite, lethargy and often anaemia. Inflammation is present in the linings of the chest and abdominal cavities often accompanied by accumulation of fluid. In addition, there is marked variation in the organs that may be involved and in the extent of the involvement.

Important in the diagnosis of FIP is:

- Clinical history
- Clinical signs
- Eye examination
- Examination of abdominal or chest fluid, if present
- Laboratory findings

This test measures coronavirus antibodies that are present in the blood or ascetic fluids. Most antibody positive cats (especially those with high titers) are possible virus carriers and may shed FCoV.

3. Intended use of the test kit

The FCoV SRE testkit is designed to detect antibodies against FCoV proteins (mostly glycoproteins). FCoV proteins are attached to the solid phase. After washing, the strips are incubated with the cat sera, to be tested. The strips are washed after incubation to remove unbound material.

A HRPO labelled anti-species conjugate is added to detect bound cat antibodies to FCoV proteins.

After incubation and rinsing the substrate is added and the optical density is measured at 620 nm.

4. Principle of the test kit

The test is based on the reaction of FCoV proteins (mostly glycoproteins's) with polyclonal cat antibodies.

To this end purified FCoV proteins have been coated to a 32-well microtiter plate. The diluted cat serum sample is added to the wells of the coated plate.

After washing the bound cat antibodies are detected by a HRPO conjugated anti-species conjugate.

The colour reaction in the wells is directly related to the concentration of FCoV antibodies in the serum.

5. Contents

- 4x 8 Microtiter strips coated with FCoV proteins
- 2x Buffer (white bottle + green cap)
- 1x Negative control (ready to use) (brown cap)
- 1x Positive control (ready to use) (yellow cap)
- 1x Conjugate (black bottle + red cap)
- 1x Substrate (white bottle + white cap)
- 1x Substrate B (black bottle +blue cap)

Supplies needed (not included)

- Precision pipette 10-200µl (EVL)
- Pipette tips (EVL)
- ELISA plate reader (the results can be interpreted by eye, but for a more accurate and objective reading the use of the ELISA plate reader is strongly recommended)

6. Handling and storage of specimens

- The kit should be stored at 4°C.
- An open packet should be used within 28 days.
- Samples may be used fresh or may be kept frozen below -20°C before use.
- Positive and negative controls may be stored after reconstitution in aliquots at -20°C and used until the expiry date.
- Avoid repeated freezing and thawing as this increases non-specific reactivity.

7. Preparations



- Before using the reagents needed, take them out of the kit and place them on the table for ± 15 min. at room temperature ($\pm 21^{\circ}\text{C}$) without exposing them to direct sunlight or (other) heat sources.
- Buffer, controls, standards and conjugates need to be shaken gently before use, in order to dissolve/mix any components that may have precipitated. Gently tap the vials onto the table, so any fluid still retained in the cap falls back into the solutions.
- If fluids need to be mixed into the test well, gently shake by tapping the wells with the fingers or re-suspend with the last pipette tip used for that particular well. Avoid contamination through spattering and prevent any fluid to enter inside the pipette itself.
- Place the reagents back at $4-8^{\circ}\text{C}$ immediately after use.

8. Test protocol qualitative

Before starting this test read “preparations”

1. Before starting this test read “**preparations**”.
2. Open the packet of strips and take out the amount of wells needed from the test strip, 1 for each sample and 2 extra wells for the controls. Cover the remaining strips with a part of the provided seal and store them at 4°C and use them within 10 days.
3. Use the Precision pipette 10-200µl and use a clean pipette tip **before** pipetting the buffer, controls, samples, conjugate and substrate.
4. Before testing make sure all reagents are at room temperature.
5. Wash the test strips with running tap water:
 - Fill all wells to the rim.
 - Empty the wells.
 - Repeat 5 times.
 - Turn the wells upside down and empty the wells by slapping the strips onto a tissue paper. Take care that none of the wells dry out before the next reagent is dispensed.
6. Add 200µl of buffer to all the wells.
7. Add 10µl of the negative control to the first well.
8. Add 10µl of the positive control to the second well.
9. Add 10µl of sample (serum/plasma) to the remaining wells.
10. Mix the reagents gently (see “**preparations**”).
11. Incubate for 40 minutes at room temperature (±21°C).
12. Wash the test strips with running tap water:
 - Fill all wells to the rim.
 - Empty the wells.
 - Repeat 5 times.
 - Turn the wells upside down and empty the wells by slapping the strips onto a tissue paper. Take care that none of the wells dry out before the next reagent is dispensed.
13. Add 100µl of conjugate to each well.
14. Incubate for 40 minutes at room temperature (±21°C).
15. Turn on the analyser (when available).
16. Wash the test strips with running tap water:
 - Fill all wells to the rim.
 - Empty the wells.
 - Repeat 5 times.
 - Turn the wells upside down and empty the wells by slapping the strips onto a tissue paper. Take care that none of the wells dry out before the next reagent is dispensed.

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17. Add 60µl of substrate A to each well.
18. Add 60µl of substrate B to each well.
19. Mix the reagents gently (see “**preparations**”).
20. Incubate for 15 minutes in the dark (e.g. cover the wells with a sheet of paper).

21. Read the absorbency values immediately (**within 10 min!**) at 620 nm on the analyser or by eye.
Note: in case of using stop solution read the absorbency at 450 nm on the analyser.

9. Illustrated Test protocol



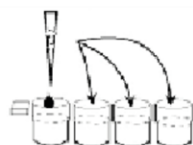
STEP: 5



- Wash procedure
- Repeat 5 times



STEP: 6



- Add 200µl of buffer to all the wells.



STEP: 7 t/m 11



- Add 10µl of the negative control to the first well.
- Add 10µl of the positive control to the second well.
- Add 10µl of sample (serum/plasma) to the remaining wells.
- Mix the reagents gently (see "preparations")
- Incubate for 40 minutes at $\pm 21^{\circ}\text{C}$

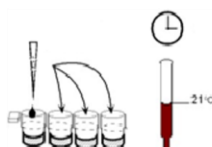
STEP: 12



- Wash procedure
- Repeat 5 times



STEP: 13 & 14



- Add 100µl of conjugate to each well.
- Incubate for 40 minutes at $\pm 21^{\circ}\text{C}$.

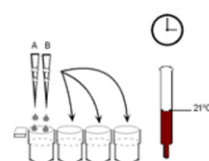


STEP: 16



- Wash procedure
- Repeat 5 times

STEP: 17 t/m 21



- Add 60µl of substrate A to each well.
- Add 60µl of substrate B to each well.
- Mix the reagents gently (see "preparations").
- Incubate for 15 minutes in the dark at $\pm 21^{\circ}\text{C}$.

Read the absorbency values immediately (within 10 min!) at 620 nm on the analyser or by eye
 Note: in case of using stop solution read the absorbency at 450 nm on the analyser.

10. Precautions

- Handle all biological material as though capable of transmitting infectious diseases.
- Do not pipette by mouth.
- Do not eat, drink, smoke or prepare foods, or apply cosmetics within the designated working area.
- TMB substrate (buffer B) is toxic by inhalation, through contact with skin or when swallowed; observe care when handling substrate.
- Do not use components past the expiry date and do not mix components from different serial lots.
- Optimal, results will be obtained by strict adherence to this protocol. Careful pipetting and washing throughout this procedure are necessary to maintain precision and accuracy.
- Each well is ultimately used as an optimal cuvette. Therefore, do not touch the under-surface of the microtiter plate and protect it from damage and dirt.

11. Interpretation of the test results











The analyser will give the results as positive, weakly positive or negative, but always double-check the outcome by observing the intensity of colour development.

- **Positive**
 - A sample is scored positive if the sample colour is dark blue, at least as blue as the positive control.
- **Weakly positive**
 - A sample is scored weakly positive if the sample colour is blue, with an intensity between that of negative and positive control.
- **Negative**
 - A sample is scored negative if the sample colour is equally blue or less blue than the negative control.

Note

A diseased animal that is positive in this test (and showing signs suggestive of coronavirus) is considered positive must be suspected of shedding coronavirus.

12. Symbols used with EVL ASSAYS

<u>Symbol</u>	<u>Definition</u>
	Consult instructions for use
	European Conformity
	In vitro diagnostic device
	For research use only
	Catalogue number
	Lot/ No. / Batch code
	Contains sufficient for <n> tests
	Storage Temperature
	Expiration Date
	Legal Manufacturer
Distributed by	Distributor
Content	Content
Volume/No.	Volume / No.

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