# Rapid Feline Immunodeficiency Virus Antibody Test Kit

For Veterinary Use Only

READ ALL INSTRUCTIONS BEFORE BEGINNING THE TEST

### RIDX<sup>™</sup> FIV Ab Test Kit

[CAT No. CGM-FIB-11]

#### Introduction

Feline immunodeficiency virus (FIV; family Retroviridae; subfamily Orthoretrovirinae; genus *Lentivirus*) is an enveloped, RNA virus that infects domestic and wild cats worldwide, as well as hyenas<sup>1</sup>. Based on the sequence diversity of the gene, there are six different subtypes of FIV, A through F<sup>2</sup>.

Most of the transmission is occurred by biting and major clinical signs are lethargy, fever, pallor, diarrhea, weight loss, muscle atrophy, stomatitis, neurologic signs of underlying neoplastic or immunemediated disorders, or opportunistic infections<sup>3</sup>.

The progression and severity of the disease are related to virus strain and host immunity. Infection of geriatric and neonatal cats is associated with more rapid progression and severity of disease than infection of young adult cats<sup>4</sup>.

Although FIV is known not to infect humans, cats need regular testing on an annual basis.

### Principle

The RIDX™ FIV Ab Test Kit is a lateral flow chromatographic immunoassay for the qualitative detection of FIV antibodies in feline blood. This kit shows two letters which are the test (T) line and the control (C) line on the surface of the device. If the FIV antibody exists in the sample, it binds to the gold-conjugated protein A. The antibody-protein A complex moves through the membrane by capillary force and responds to the FIV antigen on the test line, resulting in a red line. The control line indicates that the test is performed correctly and should appear when the test is complete.

The high–quality recombinant FIV antigen (p24) is used as capture in the kit. The RIDX<sup>TM</sup> FIV Ab Test Kit can detect FIV antibodies in feline blood with high accuracy.

#### Performance

#### 1. Sensitivity & Specificity

		ELISA		
		+	-	Total
RIDX™ FIV Ab Test	+	30	3	33
	-	1	253	254
	Total	31	256	287

Sensitivity: 96.77% (30/31, 95% CI\*: 83.81% ~ 99.43%)

Specificity: 98.83% (253/256, 95% CI: 96.61% ~ 99.60%)

Diagnostic Agreement: 98.61% (283/287, 95% CI: 96.47% ~ 99.46%)

#### 2. Cross-Reactivity

Below potential cross-reactivity substances did not affect the performance of the RIDX<sup>TM</sup> FIV Ab Test Kit.

Pathogen	Titer	Result
Feline calicivirus	$1 \times 10^5  TCID_{50}/mL$	Negative
Feline coronavirus	$1.97 \times 10^4  \text{TCID}_{50}/\text{mL}$	Negative
Feline herpesvirus	≥1/32, VN	Negative
Feline panleukopenia virus	≥1/160, HI	Negative
Toxoplasma gondii	≥1/50, IFA	Negative

### Kit Components

	Component	Number/Kit
1	FIV Test device	10
2	Dilution buffer	1
3	Anticoagulant tube	10
4	Disposable capillary tube	10
5	Instructions for use	1

### Storage & Stability

- 1. Store the test kit at 2~30°C (35.6~86°F). Do NOT freeze.
- 2. Do not store the test kit in direct sunlight.
- 3. The test kit is stable within the expiration date marked on the package label

### Sample Preparation

# [Whole blood]

- 1. Collect 1mL  $(0.5\sim1.5$ mL) of the whole blood sample and put it into an anticoagulant tube.
- 2. Close the cap on the anticoagulant tube and invert the tube 5 times to mix blood sample and EDTA.



3. The anticoagulated whole blood samples should be used immediately after collection. If you cannot use the samples immediately, store them refrigerated (2~8°C/35.6~46.4°F) or keep them on ice. Do not freeze the anticoagulated whole blood samples. If you cannot use the samples within 24 hours, store them in a form of serum or plasma.

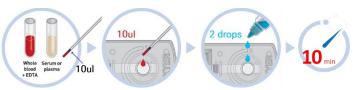
### [Serum or plasma]

- 1. Prepare serum and plasma using a standard procedure of clinical laboratory.
- 2. Serum or plasma, either fresh or stored at  $2 \sim 8^{\circ}$ C (35.6 $\sim$ 46.4 $^{\circ}$ F) for up to 72 hours, can be used. For longer storage, freeze at  $\sim$ 20 $^{\circ}$ C ( $\sim$ 4 $^{\circ}$ F).

<sup>\*</sup> CI: Confidence Interval

#### Test Procedure

- 1. All test components and samples must be at room temperature (15~30°C/59~86°F) before use.
- 2. Take 10µL blood sample (the anticoagulated whole blood, serum, or plasma) using capillary tube.
- 3. Add 10µL of sample into the sample hole (S).
- 4. Add 2 drops of the sample dilution buffer into the sample hole on the device.
- 5. Read test result at 10 minutes.



[Summary of Test Procedure]

### Interpretation of Results

#### 1. Positive result

Test (T) line and control (C) line within the result window indicate the presence of FIV antibodies.



#### 2. Negative result

Only control (C) line appears in the result window.



#### 3. Invalid results

If the control (C) line does not appear, the result might be considered invalid. The sample should be retested.



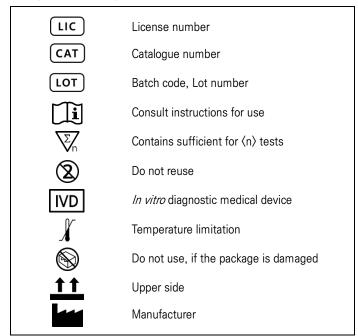
# Precautions

- 1. This test kit is for veterinary *in vitro* diagnosis only especially feline. Do not use this test kit for other animals.
- 2. The test device is sensitive to humidity and heat. Use the test device within 10 minutes after removing the foil pouch.
- 3. Do not touch the membrane of the test device.
- 4. Do not use the test device if the foil pouch is damaged or the seal is open.
- 5. Do not use an expired test kit. The expiration date is marked on the package label.
- 6. Do not reuse the test components (device, capillary tube, anticoagulant tube).
- 7. Do not mix components from different lot numbers because the components in this kit have been quality control tested as a standard batch unit.
- 8. Decontaminate and dispose of all samples, used kits, and potentially contaminated materials in the accordance with national and local regulations.
- All samples should be handled as being potentially infectious. Wear protective gloves while handling samples. Wash hands thoroughly afterward.

#### References

- 1. Troyer JL, Pecon–Slattery J, Roelke ME, *et al.* Seroprevalence and genomic divergence of circulating strains of feline immunodeficiency virus among Felidae and Hyaenidae species. *J Virol.* 2005; 79(13): 8282–8294.
- 2. Bachmann MH, Mathiason-Dubard C, Learn GH, *et al.* Genetic diversity of feline immunodeficiency virus: dual infection, recombination, and distinct evolutionary rates among envelope sequence clades. *J Virol.* 1997; 71(6): 4241–4253.
- 3. Hartmann K. Clinical aspects of feline immunodeficiency and feline leukemia virus infection. *Vet Immunol Immunopathol.* 2011; 143(3–4): 190–201
- 4. George JW, Pedersen NC, Higgins J. The effect of age on the course of experimental feline immunodeficiency virus infection in cats. *AIDS Res Hum Retroviruses.* 1993; 9(9): 897–905.

## Symbol Descriptions





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