

## For Veterinary Use Only

READ ALL INSTRUCTIONS BEFORE BEGINNING THE TEST

 RIDX™ CPV/CCV/Giardia Ag 3Dx Kit

[Catalogue Number: CGM-CTG-32, CGM-CTG-33]

 Principles

The RIDX™ CPV/CCV/Giardia Ag 3Dx Kit is a lateral flow chromatographic immunoassay for the qualitative detection of CPV (Canine parvovirus), CCV (Canine coronavirus) and *Giardia* antigens in canine feces.

This kit shows two letters which are the test (T) line and the control (C) line for each test on the surface of the device. If the pathogenic antigens (CPV, CCV or *Giardia*) exist in the sample, that bind to the gold-conjugated pathogens (CPV, CCV or *Giardia*) specific antibodies. The antigen-antibody complex moves through the membrane by capillary force and responds to the pathogen (CPV, CCV or *Giardia*) specific antibodies 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 highly selective and sensitive monoclonal antibodies to CPV (CCV or *Giardia*) is used as capture and detector in the kit. The RIDX™ CPV/CCV/Giardia Ag 3Dx Kit can detect CPV antigens, CCV antigens and *Giardia* antigens in canine feces with high accuracy.

 Performances

## [CPV Ag Test]

## 1. Sensitivity &amp; Specificity

		PCR		
		+	-	Total
RIDX™	+	101	0	101
CPV Ag	-	2	214	216
Test	Total	103	214	317

Sensitivity: 98.06% (101/103, \*95% CI: 93.19% ~ 99.47%)

Specificity: 100% (214/214, 95% CI: 98.24% ~ 100%)

Diagnostic Agreement: 99.37% (315/317, 95% CI: 97.73% ~ 99.83%)

\* 95% CI: 95% Confidence Interval

2. Limit of Detection:  $5 \times 10^3$  TCID<sub>50</sub>/mL

3. CPV-2, CPV-2a, CPV-2b diagnosis are also available.

## 4. Cross-Reactivity

Potentially cross-reactive substances listed below have no effect on the performance of the RIDX™ CPV Ag Test.

Pathogen	Titer	Result
Canine coronavirus	$1.00 \times 10^6$ TCID <sub>50</sub> /mL	Negative
Canine distemper virus	$1.00 \times 10^5$ TCID <sub>50</sub> /mL	Negative
Canine influenza virus	$1.00 \times 10^6$ EID <sub>50</sub> /mL	Negative
<i>Escherichia coli</i>	$3.56 \times 10^8$ CFU/mL	Negative
<i>Giardia</i> spp.	$1.42 \times 10^5$ Cysts/ $\mu$ L	Negative
<i>Salmonella</i> spp.	$1.00 \times 10^6$ CFU/mL	Negative

## [CCV Ag Test]

## 1. Sensitivity &amp; Specificity

		RT-PCR		
		+	-	Total
RIDX™	+	56	3	59
CCV Ag	-	3	118	121
Test	Total	59	121	180

Sensitivity: 94.92% (56/59, \*95% CI: 86.06% ~ 98.26%)

Specificity: 97.52% (118/121, 95% CI: 92.92% ~ 99.15%)

Diagnostic Agreement: 96.67% (174/180, 95% CI: 92.92% ~ 98.46%)

\* 95% CI: 95% Confidence Interval

2. Limit of Detection:  $1 \times 10^5$  TCID<sub>50</sub>/mL

## 3. Cross-Reactivity

Potentially cross-reactive substances listed below have no effect on the performance of the RIDX™ CCV Ag Test Kit.

Pathogen	Titer	Result
Canine distemper virus	$1.00 \times 10^5$ TCID <sub>50</sub> /mL	Negative
Canine influenza virus	$1.00 \times 10^6$ EID <sub>50</sub> /mL	Negative
Canine parvovirus	$1.00 \times 10^6$ TCID <sub>50</sub> /mL	Negative
<i>Escherichia coli</i>	$3.56 \times 10^8$ CFU/mL	Negative
<i>Giardia</i> spp.	$1.42 \times 10^5$ Cysts/ $\mu$ L	Negative
<i>Salmonella</i> spp.	$1.00 \times 10^6$ CFU/mL	Negative

## [Giardia Ag Test]

## 1. Clinical Sensitivity &amp; Clinical Specificity

		Disease Status		
		+	-	Total
RIDX™	+	34	4	38
Giardia Ag	-	1	109	110
Test	Total	35	113	148

Clinical Sensitivity: 97.14% (34/35, \*95% CI: 95.47% ~ 99.49%)

Clinical Specificity: 96.46% (109/113, 95% CI: 91.25% ~ 98.61%)

Diagnostic Accuracy: 96.62% (143/148, 95% CI: 92.34% ~ 98.55%)

\* 95% CI: 95% Confidence Interval

2. Limit of Detection: 1.25 Cysts/ $\mu$ L

## 3. Cross-Reactivity

Potentially cross-reactive substances listed below have no effect on the performance of the RIDX™ Giardia Ag Test.

Pathogen	Titer	Result
Canine coronavirus	$1.00 \times 10^6$ TCID <sub>50</sub> /mL	Negative
Canine distemper virus	$1.00 \times 10^5$ TCID <sub>50</sub> /mL	Negative
Canine influenza virus	$1.00 \times 10^6$ EID <sub>50</sub> /mL	Negative
Feline calici virus	$1.00 \times 10^5$ TCID <sub>50</sub> /mL	Negative
Feline coronavirus	$1.97 \times 10^4$ TCID <sub>50</sub> /mL	Negative
Feline parvovirus	$1.00 \times 10^{5.5}$ TCID <sub>50</sub> /mL	Negative

## ◆ Kit Components

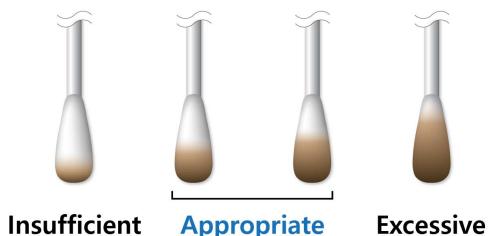
Component	Quantity/kit by CAT No.	
	CGM-CTG-32	CGM-CTG-33
1 CPV/CCV/Giardia Ag 3Dx device	10	2
2 Dilution buffer for CPV & CCV tests	10	2
3 Dilution buffer for <i>Giardia</i> test	10	2
4 Disposable swab	20	4
5 Disposable dropper	20	4
6 Instructions for use	1	1

## ◆ Storage & Stability

1. Store the test kit at 2~30°C (35.6~86.0°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.

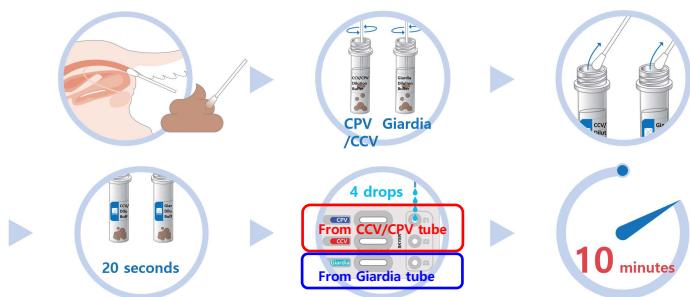
## ◆ Sample Preparation

1. Canine fecal swab should be used for this test.
2. The samples should be tested immediately after collection.
3. If samples cannot be tested immediately, they should be stored at 2~8°C (35.6~46.4°F) for up to 24 hours. For longer storage, freeze at -20°C (-4°F) or below. But, results from samples frozen for over one month may differ from those obtained before freezing. Frozen samples should be brought to room temperature (15~30°C/59~86°F) before use.
4. The amount of fecal sample with swab may affect the results. It is required to follow the swab amount of feces as shown in the picture below. The excessive fecal amount may induce a false positive result and slow migration.



## ◆ Test Procedure

1. All reagents and samples must be at room temperature (15~30°C /59~86°F) before use.
2. Collect feces samples using the swabs.
3. **Put the first swab into the CCV/CPV Dilution Buffer tube and the second swab into the Giardia Dilution Buffer tube.**
4. Stir the solution in each tube with the swab to disperse the sample into the buffer (approximately 10 seconds).
5. Remove the swab from each sample dilution buffer tube.
6. Wait for 20 seconds to settle down the large particles.
7. Remove a test device from the pouch and place it on a flat and dry surface.
8. Take the supernatant samples in each tube by using a disposable dropper.
9. Apply 4 drops of the mixed CPV/CCV sample solution into the sample holes (**S1** and **S2**) for each, drop by drop vertically.
10. Apply 4 drops of the mixed *Giardia* sample solution into the sample hole (**S3**), drop by drop vertically.
11. Read test results at 10 minutes. **Do not read results that appear after 10 minutes.**



[Summary of Test Procedure]

## ◆ Interpretation of Results

### 1. Positive Results

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

[CPV positive]

[CCV positive]

[*Giardia* positive]



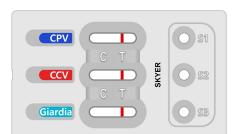
### 2. Negative Result

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* diagnostic use only for dogs. 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. The device should not be used if the foil pouch is damaged or opened.
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, buffer, dropper, and swab).
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.
9. All samples should be handled as being potentially infectious. Wear protective gloves while handling samples. Wash hands thoroughly afterward.



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