

trūRapid

TEST THE DIFFERENCE

PRODUCT BROCHURE

IMMUNOLOGICAL
TEST



A wide range of tests for all diseases

| Species | Sample | Test | Antigen/ Antibody | Disease |
|---------|--------|-----------------------------------|----------------------|---|
| | | trūRapid FOUR | Ag Ab Ab Ab | Dirofilariasis Lyme Ehrlichiosis Anaplasmosis |
| | | trūRapid FOUR Leish | Ag Ab Ab Ab | Dirofilariasis Leishmaniosis Ehrlichiosis Anaplasmosis |
| | | trūRapid Anaplasma | Ab | Anaplasmosis |
| | | trūRapid Ehrlichia | Ab | Ehrlichiosis |
| | | trūRapid Heartworm Dirofilaria | Ag | Dirofilariasis |
| | | trūRapid Leptospirosis | Ab | Leptospirosis |
| | | trūRapid Lyme | Ab | Lyme |
| | | trūRapid Leishmania | Ab | Leishmaniosis |

| Species | Sample | Test | Antigen/ Antibody | Disease |
|---------|--------|-------------------|----------------------|--|
| | | trūRapid FIV/FeLV | Ab Ag | Feline Immunodeficiency Feline Leukemia |

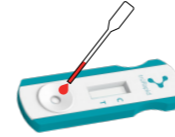
| Species | Sample | Test | Antigen/ Antibody | Disease |
|---------|--------|---|----------------------|--|
| | | trūRapid Parvovirus Giardia Coronavirus | Ag Ag Ag | CPV/Parvovirus GIA/Giardiasis CCV/Coronaviriosis |
| | | trūRapid Parvovirus Giardia | Ag Ag | CPV/Parvovirus GIA/Giardiasis |
| | | trūRapid Parvovirus | Ag | CPV/Parvovirus |
| | | trūRapid Giardia | Ag | GIA/Giardiasis |

* Coronavirus test is available only for dog



Discover in the last page the other COMING SOON tests!

WHOLE BLOOD / SERUM / PLASMA



Using the provided pipette, vertically dispense **1 drop** of sample into the sample well without touching the pipette to the test device. Allow the sample to absorb.

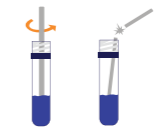


Add **2 drops** of buffer vertically to the sample well. Interpret the results after 10 minutes.

FECES



Unscrew the cap from the sample extraction buffer. Using the provided swab, coat the swab with a thin layer of fecal material. Try to saturate the swab with liquid, if any.



Immerse the sample swab into the sample extraction buffer and swirl the swab in the buffer. Break the swab shaft on the mouth of the bottle keeping the cotton swab in the bottle.



Replace the bottle cap. Snap off the tip. Apply **3 drops** into each sample well of the device and wait 10 minutes.

RESULTS INTERPRETATION

positive



The test is **positive** if two lines are present (a control line C and a test line T).

negative



The test is **negative** if only one control line C is present.

invalid



The test is **invalid** if no line appears at the control line C even if a line is present at the test line T.

DISCOVER THE PLUS,
FEEL THE DIFFERENCE



2 SPECIES



SHORT
TEST TIME



SMALL
SAMPLE
VOLUME



+15 °C EASY
+30 °C STORAGE

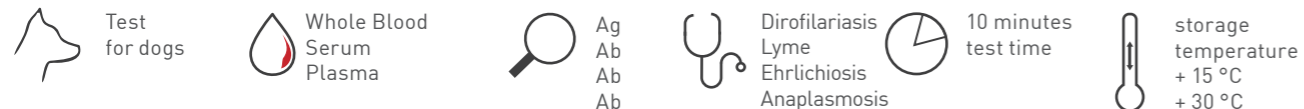
trūRapid
FOUR
One test for 4
major vector-
transmitted
diseases!

trūRapid FOUR

trūRapid FOUR is a rapid test for the detection of **Dirofilaria immitis antigen; Borrelia burgdorferi antibody; Anaplasma phagocytophilum and platys antibodies; Ehrlichia canis, chaffeensis, and ewingii antibodies** in canine serum, plasma,

or anti-coagulated whole blood. Testing dogs regularly for these diseases is strongly recommended to make a preventive diagnosis, to determine if there is an active infection and to reinforce the importance of tick control. Early detection is the best way to

protect your patients and with the trūRapid FOUR, you can test the most common vectorborne diseases simultaneously.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|--------------------------------------|--|
| Dirofilaria | 98% | 100% | Necroscopy and commercial rapid test | 5-7 months after exposure |
| Borrelia burgdorferi (Lyme) | 98,9% | 99,5 % | commercial rapid test | 3-6 weeks after exposure |
| Ehrlichia | 98,1% | 99,6% | commercial rapid test | 1-3 weeks after exposure |
| Anaplasma | 97,4% | 99,5 % | commercial rapid test | 3-6 weeks after exposure In case of symptoms with negative test → PCR |

Test identity card

Name: trūRapid FOUR
Sample Type: Whole Blood/Serum/Plasma
Shelf Life: 18 Months
Test Time: 10 Minutes
Species: Dog
Storage: Room Temperature



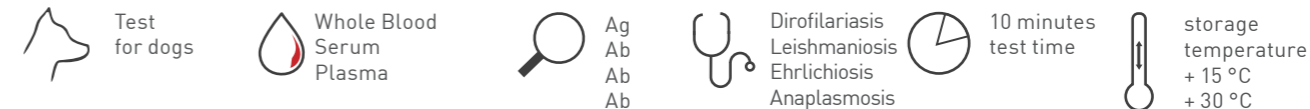
trūRapid
FOUR Leish
One test for 4
major vector-
transmitted
diseases!

trūRapid FOUR Leish

trūRapid FOUR Leishmania is a rapid test for the detection of **Dirofilaria antigen; Anaplasma phagocytophilum and platys antibodies; Leishmania infantum antibody; Ehrlichia canis, chaffeensis and ewingii antibodies** in canine serum, plasma, or anti-coagulated whole blood.

Testing dogs regularly for these diseases is strongly recommended to make a preventive diagnosis, to determine if there is an active infection and to reinforce the importance of ticks and sandflies control.

Early detection is the best way to protect your patients and with the trūRapid FOUR Leishmania, you can test the most common vector borne diseases simultaneously.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|--------------------------------------|--|
| Dirofilaria | 98% | 100% | Necroscopy and commercial rapid test | 5-7 months after exposure |
| Leishmania | 100% | 98,46 % | IFA | 2-3 months after exposure |
| Ehrlichia | 98,1% | 99,6% | commercial rapid test | 1-3 weeks after exposure |
| Anaplasma | 97,4% | 99,5 % | commercial rapid test | 3-6 weeks after exposure In case of symptoms with negative test → PCR |

Test identity card

Name: trūRapid FOUR Leish
Sample Type: Whole Blood/Serum/Plasma
Shelf Life: 18 Months
Test Time: 10 Minutes
Species: Dog
Storage: Room Temperature



trūRapid Anaplasma

trūRapid Anaplasma is a rapid test for detection of **Anaplasma phagocytophilum and platys antibodies** in canine serum, plasma, or anticoagulated whole blood.

Anaplasmosis is a bacterial disease that, in a dogs, comes in two forms. Anaplasma phagocytophilum infects neutrophils (this is the form that is also found in people). The second type of Anaplasma organism, Anaplasma platys, infects a dog's platelets. Anaplasmosis occurs worldwide in a

wide number of mammals including dogs, cats, and people. Rodents are thought to be the reservoir for Anaplasma phagocytophilum while dogs are theorized to be the reservoir for Anaplasma platys. In both cases, while mammals are the reservoir, ticks are the means of transmission. Symptoms usually begin within one to two weeks of the initial tick bite and transmission. The symptoms vary depending on which organism has infected the dog. Anaplasma phagocytophilum is

the most common form of anaplasmosis. Reported signs include lameness and joint pain, lethargy, inappetence, fever. Anaplasma platys infects the platelets, therefore, signs of this form of anaplasmosis are related to the body's inability to properly stop bleeding and include bruising and petechia as well as nosebleeds.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|---|
| Anaplasma | 97,4% | 99.5 % | commercial rapid test | 3-6 weeks after exposure In case of symptoms with negative test → PCR |

Test identity card

| | | | |
|--------------|--------------------------|------------|------------------|
| Name: | trūRapid Anaplasma | Test Time: | 10 Minutes |
| Sample Type: | Whole Blood/Serum/Plasma | Species: | Dog |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



Abstract: Diagnosis of Anaplasmosis disease in dogs

The trūRapid Anaplasma is used for the detection of Anaplasma antibodies in canine serum, plasma and anticoagulated whole blood.

Details of the study

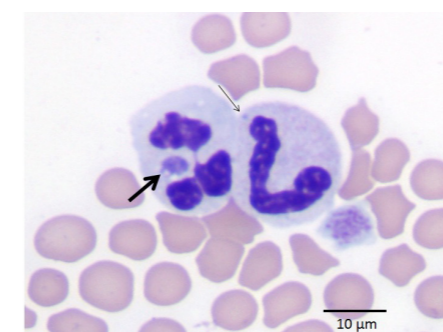
The Anaplasma antibody test strips were tested in the validation study 2017. A total of 260 dog sera were

evaluated with the Anaplasma antibody test. As comparison, the SNAP4Dx was used as a reference test. A. platys infects canine platelets and is frequently seen as a coinfection with Ehrlichia canis.

Dogs coinfectd with E. canis and A. platys were found to have more severe anemia and thrombocyto-

penia than dogs with either single infection. Anaplasmosis is considered a zoonotic pathogen. This means it has the potential to infect humans.

However, direct transmission from animals to people, or animal to animal is highly unlikely and has not been documented.



| TEST | SNAP4Dx POS | SNAP4Dx NEG |
|------------------------|-------------|-------------|
| trūRapid Anaplasma POS | 73 | 1 |
| trūRapid Anaplasma NEG | 2 | 184 |
| SENSITIVITY | 97.33% | |
| SPECIFICITY | 99.46% | |

trūRapid Ehrlichia

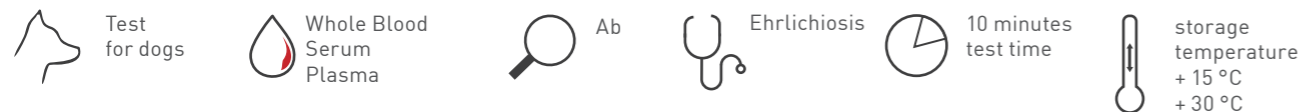
trūRapid Ehrlichia is a rapid test for detection of **Ehrlichia canis, chaffeensis, and ewingii antibodies** in canine serum, plasma, or anticoagulated whole blood.

Ehrlichiosis is the general name used to describe diseases caused by the bacteria Ehrlichia canis, chaffeensis, and ewingii and transmitted by ticks. The infection

leads to multisystemic disease in dogs characterized by acute disease with unspecific signs, coagulation disorders, and ophthalmological lesions. The subclinical disease is common with minimal clinical illness and thrombocytopenia. Some patients develop chronic disease which often resembles a similar clinical disease to the acute phase. Antibodies against Ehrlichia

canis start to develop within 6-28 days post-infection and should be interpreted together with the clinical picture. Detection of antibodies present is rapidly performed using the trūRapid Ehrlichia.

Diagnosis of canine ehrlichiosis in dogs is based on clinical signs, the area the dog lives, hematology, cytology, serology and isolation.



- Test for dogs
- Whole Blood Serum Plasma
- Ab
- Ehrlichiosis
- 10 minutes test time
- storage temperature +15 °C +30 °C

test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|--------------------------|
| Ehrlichia | 98,1% | 99.6 % | commercial rapid test | 1-3 weeks after exposure |

Test identity card

| | | | |
|--------------|--------------------------|------------|------------------|
| Name: | trūRapid Ehrlichia | Test Time: | 10 Minutes |
| Sample Type: | Whole Blood/Serum/Plasma | Species: | Dog |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



Abstract: Diagnosis of Ehrlichiosis disease in dogs

Diagnosis of E.canis, E. chaffeensis and E. ewingii infection in animals is based on the detection of E.canis, E. chaffeensis and E. ewingii specific antibodies in serum, plasma and anticoagulated whole blood in the trūRapid Ehrlichia.

Details of the study

The truRapid Ehrlichia was tested in the validation study 2018.

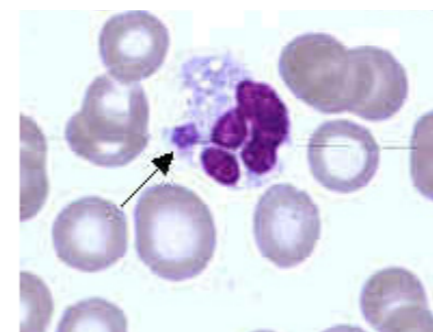
The total of 288 dogs were evaluated with the truRapid Ehrlichia. As comparison, the VetScan Canine Ehrlichia antibody test kit was used as a reference test.

The main host of Ehrlichia canis is the dog and the vector is the tick Rhipicephalus sanguineus. Ehrlichia canis, or a closely related species, has been described in cats but the clinical relevance is

unclear.

Concurrent vector borne infections are common in the same dog, also because some species are transmitted in the same arthropod vector.

Ehrlichia canis is not considered a zoonotic agent.



Please contact your local business partner for the total validation: scilvet.com

| TEST | ABAXIS POS | Abaxis NEG |
|------------------------|------------|------------|
| trūRapid Ehrlichia POS | 52 | 1 |
| trūRapid Ehrlichia NEG | 1 | 234 |
| SENSITIVITY | 98.1% | |
| SPECIFICITY | 99.6% | |

trūRapid Heartworm (Dirofilaria)

trūRapid Heartworm Dirofilaria is a rapid test for detection of **Dirofilaria immitis antigen** in canine serum, plasma, or anticoagulated whole blood. 6-7 month after infection, adult female worms become apparent and can specifically be detected using trūRapid Dirofilaria.

The parasite commonly resides in the pulmonary arterial system as well as the heart and a major effect on animal health is manifestation of damage to the lung vessels and tissue. The clinical picture of the disease varies in affected dogs. Mild cases may be asymptomatic but more severely affected patients can

show different stages of respiratory and cardiovascular diseases. The parasite is endemic in many tropical and subtropical regions. Therefore regular prophylactic treatment is needed for the dogs as well as checks for infectious status using trūRapid Dirofilaria.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|------------------------------------|---------------------------|
| Dirofilaria | 98% | 100 % | Necropsy and commercial rapid test | 5-7 months after exposure |

Test identity card

Name: trūRapid Heartworm Dirofilaria Test Time: 10 Minutes
 Sample Type: Whole Blood/Serum/Plasma Species: Dog
 Shelf Life: 12 Months Storage: Room Temperature



Abstract: Diagnosis of Heartworm disease in dogs

Diagnosis of Heartworm disease in dogs is based on clinical signs and the presence of heartworm antigen in blood. It is recommended an annual screening for all dogs over seven months of age. Additional testing is needed to confirm an active heartworm infection prior to the administration of any therapy. Confirmation is accomplished when another positive result is obtained utilizing a different type of antigen test, or the identification of circulating microfilariae.

Ultrasonography, radiography and echocardiography are also useful for confirming the diagnosis. In case of a negative rapid test result, the test has not detected heartworm antigen. A negative test also indicates that the animal is not infected or in an early-stage of infection (less than five to six months after infection pri-

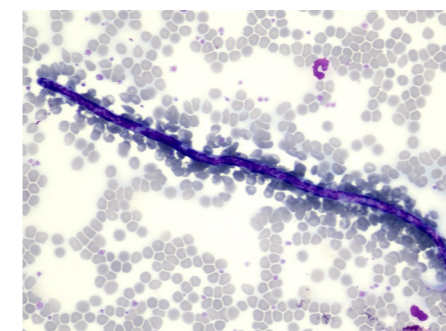
or to testing, during which the parasites have not matured into adult worms). In suspect cases, the test can be repeated in 5-6 months and additional diagnostic tests such as microfilaria testing, ultrasonography, echocardiography or radiography can be performed by the clinician.

Sensitivity and Specificity

The sensitivity and specificity of the test kit are based on the data generated during the USDA licensing process. A total of 350 serum samples were tested with trūRapid Heartworm (Dirofilaria) test. All positive samples were characterized by necropsy. The negative samples were characterized by DiroCHECK® Heartworm Antigen test. Sensitivity and specificity

were determined using necropsy and DiroCHECK® Heartworm Antigen test results with a 2x2 analysis table, respectively (Table 1). All data is from naturally infected animals.

Table 1: 2x2 Sensitivity and Specificity of trūRapid Heartworm (Dirofilaria) test *. This study shows Heska trūRapid Heartworm (Dirofilaria) conveys excellent sensitivity and specificity (98%, 100%) for detection of Dirofilaria immitis antigen when compared to necropsy findings and a leading point-of-care heartworm ELISA antigen test. According to American Heartworm Society (AHS) guideline, if the test is positive, heartworm antigens are present. With the excellent sensitivity and specificity displayed in this validation study, Heska trūRapid Heartworm (Dirofilaria) provides reliability in screening and diagnosing heartworm infection and disease.



Please contact your local business partner for the total validation: scilvet.com

| TEST | NECROPSY POS | DiroCHECK NEG |
|--------------------------------------|--------------|---------------|
| trūRapid Heartworm (Dirofilaria) POS | 147 | 0 |
| trūRapid Heartworm (Dirofilaria) NEG | 3 | 200 |
| SENSITIVITY | 98% | |
| SPECIFICITY | 100% | |

trūRapid Leishmania

trūRapid Leishmania is a rapid test for detection of **Leishmania infantum antibody** in canine serum, plasma or anticoagulated whole blood. Leishmaniosis is a zoonosis that spreads across the tropics, subtropics, southern Europe as well as the Mediterranean and is transmitted by female sandflies (Phlebotomidae).

Leishmaniosis has even a noteworthy meaning in far northern areas as a travel or an imported disease. Due to an incubation period ranging from months to years dogs of all ages can be infected. The disease can proceed symptomatically, subclinically, or latently; clinical symptoms are (ordered by decreasing frequency) lymph-

adenopathy, skin reactions, cachexia, hyperthermia, conjunctivitis, splenomegaly and abnormal claws. Renal failure may develop in later stages of the disease and often leads to complications. As eradication of parasites is not possible, early detection of disease and lifelong treatment of the patient is required.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------|---------------------------|
| Leishmania | 100% | 98,46% | IFA | 2-3 months after exposure |

Test identity card

| | | | |
|--------------|--------------------------|------------|------------------|
| Name: | trūRapid Leishmania | Test Time: | 10 Minutes |
| Sample Type: | Whole Blood/Serum/Plasma | Species: | Dog |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



Abstract: Diagnosis of Leishmaniosis disease in dogs

Dogs are the main reservoir of *L. infantum* but cats and other wild carnivores can also be hosts. Many other mammalian species can become infected including humans. Human cutaneous and visceral leishmaniosis is an important vectorborne zoonotic disease in southern Europe.

Clinical cases of human leishmaniosis are mainly reported

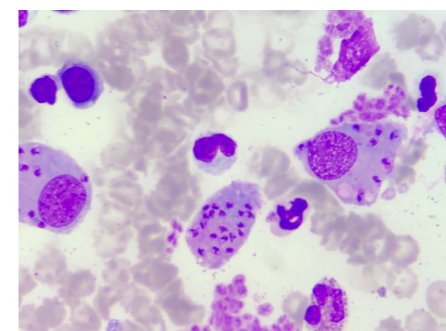
in children and immunocompromised patients. Diagnosis of Leishmania infection in animals is based on the detection of Leishmania-specific antibody in serum, plasma and anticoagulated whole blood in the trūRapid Leishmania.

Details of the study

The Leishmania antibody test strips were tested in the validation study 2022.

A total of 195 dog sera were evaluated with the Leishmania antibody test.

As comparison, URANO® Quattro test and IFA test were used as reference tests for sensitivity and specificity, respectively. CBC, biochemical profile and urinalysis including a urine protein/creatinine ratio should always be performed.



Please contact your local business partner for the total validation: scilvet.com

| TEST | URANO POS | IFA NEG |
|-------------------------|-----------|---------|
| trūRapid Leishmania POS | 65 | 2 |
| trūRapid Leishmania NEG | 0 | 128 |
| SENSITIVITY | 100% | |
| SPECIFICITY | 98.46% | |

trūRapid Lyme

The trūRapid Lyme is a rapid test for detection of **Borrelia burgdorferi antibody** in canine serum plasma, or anticoagulated whole blood.

Lyme disease is a common vector-borne disease all over the world; it is caused by the bacterium *Borrelia burgdorferi*. Lyme disease is

transmitted to humans through the bite of infected black legged ticks.

Typical symptoms include fever, headache, fatigue and a characteristic skin rash called erythema migrans. If left untreated, the infection can spread to joints, the heart, and the nervous system.

Lyme disease is suspected based on symptoms, physical findings (e.g., rash), and the possibility of exposure to infected ticks.

trūRapid Lyme identifies C6 antibodies that are produced as a result of a *Borrelia burgdorferi* infection.

test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|--------------------------|
| Borrelia burgdorferi (Lyme) | 98,9% | 99,5% | commercial rapid test | 3-6 weeks after exposure |

Test identity card

| | | | |
|--------------|--------------------------|------------|------------------|
| Name: | trūRapid Lyme | Test Time: | 10 Minutes |
| Sample Type: | Whole Blood/Serum/Plasma | Species: | Dog |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



Abstract: Diagnosis of Lyme disease in dogs

Lyme disease is the most common tickborne infection among people in North America and Europe.

The highest prevalence in Europe was found to be in central Europe. The geographic distribution has expanded because of bird migration, suburban sprawl and climate changes. Identifying Lyme disease in canines can also provide insight into the risk to humans of Lyme disease.

Although canines themselves cannot transmit the disease to humans except via ticks, an animal contracting Lyme disease suggests an elevated risk of Lyme infection.

Clinical signs of Lyme disease in dogs include fever, lethargy, loss of appetite and joint disorders. However, most infected canines remain clinically healthy after infection.

Other symptoms that may occur include vomiting and diarrhea. Diagnosis of Lyme disease in dogs is based on clinical signs, the area where the dog lives and a high titer of *Borrelia burgdorferi*-specific antibodies.

The trūRapid Lyme provides rapid on-site results intended for use in diagnostics. A study was performed using trūRapid Lyme on January 4, 2017. Positive samples were from artificially infected animals participating in vaccine and antibiotic efficacy studies.

Negative samples were from SPF dogs obtained from Liberty Research, Waverly, NY.

All samples were concurrently tested on SNAP4Dx (IDEXX Laboratories, Westbrook, Maine) devices. Results are found in Table 1. Sensitivity and specificity were determined using IDEXX results with a 2x2 analysis table.

Please contact your local business partner for the total validation: scilvet.com

| TEST | IDEXX Pos | IDEXX Neg |
|-------------------|-----------|-----------|
| trūRapid Lyme POS | 92 | 1 |
| trūRapid Lyme NEG | 1 | 201 |
| SENSITIVITY | 98.9% | |
| SPECIFICITY | 99.5% | |

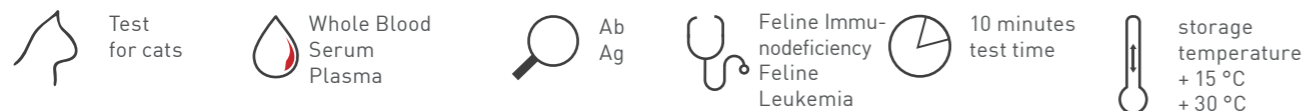
trūRapid FIV/FeLV

The trūRapid FIV/FeLV is a rapid test for detection of **FIV antibody and FeLV antigen** in serum, plasma, or anticoagulated whole blood.

Retroviruses are an important infectious agent in cats worldwide. The FeLV disease manifests primarily through profound anemia, malignancies, and

immunosuppression. Cats infected with FeLV have varying levels of antigen against protein P27 in their blood which makes serological testing for antigen an excellent diagnostic tool. Infection with the Feline Immunodeficiency Virus (FIV) leads to disruption of the animal's immune status and makes it prone to co-infections with other diseases

(i.e. FeLV). Lymphadenomegaly, stomatitis, conjunctivitis, as well as diseases of the upper respiratory tract, can occur. An FIV-infected cat may not show any symptoms for years, but the cats infected FIV produce high levels of antibodies throughout their lifetimes making it advantageous to diagnose the disease with serological testing.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|-----------------------------------|
| FIV | 99% | 98,50% | IFA | minimum of 60 days after exposure |
| FeLV | 99% | 100% | commercial rapid test | minimum of 28 days after exposure |

Test identity card

| | | | |
|--------------|--------------------------|------------|------------------|
| Name: | trūRapid FIV/FeLV | Test Time: | 10 Minutes |
| Sample Type: | Whole Blood/Serum/Plasma | Species: | Cat |
| Shelf Life: | 12 Months | Storage: | Room Temperature |



Abstract: Diagnosis of FIV and FeLV

The prevalence rates for FeLV infection in United states is 2.3%. The rates of FeLV infection has decreased significantly since the development of an effective vaccine and accurate testing procedures. Some cats infected with FeLV can completely clear the infection (abortive infections) or partial clear the infection (regressive infections), which is more common in older cats. However, some cats especially for

kittens and younger cats, become persistently viremic (progressive infection); they will shed the virus and be infected for the remainder of their life and develop FeLV associated disease. The national incidence of diagnosed FIV infection in the United States is 4.56%. For cats that are already sick or at risk of infection, the prevalence rate can be as high as 15%. Since FIV is transmitted primarily through cat

bites, aggressive cats are at a higher risk of becoming infected. Indoor cats that live alone see little risk of becoming infected. Outdoor cats that engage in fights often are at a much higher risk. Rarely, the infection can be transmitted from a mother cat to her kittens. The trūRapid FIV test kit detects antibodies against the FIV glycoprotein gp40 and provides rapid on-site results intended for use in diagnostics.

Table 1:
2x2 Sensitivity and Specificity compared with Commercial ELISA test*



Table 2:
2x2 Sensitivity and Specificity based on Naturally Infected Animals*

| TEST | COMMERCIAL ELISA TEST POS | COMMERCIAL ELISA TEST NEG |
|-------------------|---------------------------|---------------------------|
| trūRapid FeLV POS | 99 | 0 |
| trūRapid FeLV NEG | 1 | 135 |
| SENSITIVITY | 99.0% | |
| SPECIFICITY | 100% | |

* USDA Licensing Sensitivity and Specificity Report Based on the analysis, the sensitivity of the trūRapid FeLV test kit is 99.0% and the specificity is 100%

| TEST | IFA POS | IFA NEG |
|------------------|---------|---------|
| trūRapid FIV POS | 204 | 4 |
| trūRapid FIV NEG | 2 | 268 |
| SENSITIVITY | 99.0% | |
| SPECIFICITY | 98.5% | |

* USDA Licensing Sensitivity and Specificity Report Based on the analysis, the sensitivity of the trūRapid FIV test kit is 99% and the specificity is 98.5%

trūRapid Giardia

The trūRapid Giardia is a rapid test for detection of **Giardia duodenalis** (also known as *G. intestinalis* or *G. lamblia*) **antigen** in canine and feline feces. *Giardia duodenalis* is a global, widespread, zoonotic protozoan parasite that forms trophozoites in the intestine where they can lead to enterocyte apoptosis and diarrhea.

Trophozoites and infectious cysts are intermittently shed with the feces. Clinically, *Giardia* infection can lead to acute or chronic diarrhea in dogs and cats, which may be self-limiting. Asymptomatic cases occur frequently as well as periodic-intermittent diseases. The latter one is attributed to the persistence of cysts for a

month in the environment as they are very resistant. The parasite can be transmitted by ingesting these cysts from contaminated ground, food, or drinking water; these facts favor reinfection of patients, which is especially in households with multiple animals problematic.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------|-------------------------|
| Giardia | 94,9% | 97,8% | DFA | 5-8 days after exposure |

Test identity card

| | | | |
|--------------|------------------|------------|------------------|
| Name: | trūRapid Giardia | Test Time: | 10 Minutes |
| Sample Type: | Feces | Species: | Dog & Cat |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



Abstract: Diagnosis of Giardiasis disease in dogs

The prevalence rates for *Giardia* infection in United states vary from 5% to 15% in healthy or symptomatic dogs or cats, which depends on the population studied, the area surveyed, and diagnostics method used.

Symptoms and Risk

The Giardiasis clinical symptoms in dogs and cats range from asymptomatic to slight abdominal discomfort to severe gastrointestinal disease. Diarrhea is the most common clinical sign; is usually self-limiting in immunocompetent animals. Severe diarrhea may cause dehydration, lethargy, and anorexia. However, most infected dogs and cats do not deve-

lop fever, and they remain alert and maintain a normal appetite. The Companion Animal Parasite Council recommends the testing of dogs and cats with intermittent or consistent diarrhea with the combination of direct smear, fecal flotation with centrifugation, and *Giardia* antigen ELISA tests. In additional, due to intermittent shedding of *Giardia* cysts, repeat testing performed over several days is also recommended to help identify the infection.

Diagnosis of *Giardia* infections by fecal flotation or fecal smear could be difficult, since the cysts are small and similar as other microor-

ganism such as yeast. The Direct Immunofluorescence Assay (DFA) has been shown to be more sensitive and specific than the conventional flotation method, therefore DFA has widely served as the gold standard method. Total of 292 fecal samples collected from pet store, shelter or clinics in New York city and Baltimore area were tested with trūRapid Giardia test kit. The results were compared with the DFA, the gold standard method. The Merifluor® Cryptosporidium /*Giardia* DFA kit was purchased from Meridian Biosciences, Cincinnati, USA. The estimated sensitivity of the DFA kit is 100% and the estimated specificity is 100%.

Table 1:
2x2 Sensitivity and Specificity compared with DFA*

| TEST | DFA POS | DFA NEG |
|----------------------|---------|---------|
| trūRapid Giardia POS | 150 | 3 |
| trūRapid Giardia NEG | 8 | 131 |
| SENSITIVITY | 94.9% | |
| SPECIFICITY | 97.8% | |

Please contact your local business partner for the total validation: scilvet.com

* Internal study no 8734004

trūRapid Parvovirus

The trūRapid Parvovirus is a rapid test for the detection of **Parvovirus (CPV, FPV) antigens in dogs' and cats' feces**. The Parvo is a highly contagious and relatively common cause of acute gastroenteritis in young animals. Initial clinical signs may be nonspecific with progression to vomiting and hemorrhagic small

bowel diarrhea. All animals with relevant clinical signs should be immediately tested, so appropriate isolation procedures can be initiated. A negative result with the trūRapid Parvovirus antigen test does not completely rule out a parvovirus infection: fecal shedding of parvovirus antigen at detectable levels typically

occurs between 3-12 days post-exposure and usually correlates with the onset of clinical signs. In puppies with moderate maternal antibody levels, viral shedding may be delayed by 1-2 days relative to the onset of clinical signs. Virus shedding begins to reduce by day 8-10 (post-infection).



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|-------------------------|
| Parvovirus | 100% | 100% | commercial rapid test | 4-8 days after exposure |

Test identity card

| | | | |
|--------------|---------------------|------------|------------------|
| Name: | trūRapid Parvovirus | Test Time: | 10 Minutes |
| Sample Type: | Feces | Species: | Dog & Cat |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



trūRapid Parvovirus Giardia

The trūRapid Parvovirus Giardia is a rapid test for the detection of **Parvovirus (CPV and FPV) and Giardia duodenalis antigens** in fecal samples of dogs and cats. The Parvo is a highly contagious and relatively common cause of acute gastroenteritis in

young animals. Initial clinical signs may be nonspecific with progression to vomiting and hemorrhagic small-bowel diarrhea. Giardiasis is an intestinal infection in humans and animals, caused by a microscopic protozoan parasite Giardia spp.

Giardia infection can be acute or chronic. Intermittent shedding of causative agents should be considered. Parallel screening of the two diseases is useful to differentiate them as the clinical symptoms are similar and facilitates the rapid workflow in the clinic.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|-------------------------|
| Parvovirus | 100% | 100% | commercial rapid test | 4-8 days after exposure |
| Giardia | 94,9% | 97,8% | DFA | 5-8 days after exposure |

Test identity card

| | | | |
|--------------|-----------------------------|------------|------------------|
| Name: | trūRapid Parvovirus Giardia | Test Time: | 10 Minutes |
| Sample Type: | Feces | Species: | Dog & Cat |
| Shelf Life: | 18 Months | Storage: | Room Temperature |



trūRapid Parvovirus Giardia Coronavirus

The trūRapid Parvovirus Giardia Coronavirus is a rapid test for the detection of **Parvovirus (CPV)**, **Coronavirus (CCV)** and **Giardia duodenalis antigens in fecal samples of dogs and cats.**

The Parvo is a highly contagious and relatively common cause of acute gastroenteritis in young animals.

Initial clinical signs may be non-specific with progression to vomiting and hemorrhagic small-bowel diarrhea. The Coronavirus infection is an important cause of gastroenteritis in dogs of any age.

Giardiasis is an intestinal infection in humans and animals, caused by a microscopic protozoan parasite

Giardia spp. Giardia infection can be acute or chronic. Intermittent shedding of causative agents should be considered. Parallel screening of the three diseases is useful to differentiate them as the clinical symptoms are similar and facilitates the rapid workflow in the clinic.



test performance

| Infectious agent (annual screening recommended) | Sensitivity | Specificity | Reference | When to test |
|--|-------------|-------------|-----------------------|-------------------------|
| Parvovirus | 100% | 100% | commercial rapid test | 4-8 days after exposure |
| Giardia | 94,9% | 97,8% | DFA | 5-8 days after exposure |

Test identity card

Name: trūRapid Parvovirus Giardia Coronavirus Test Time: 10 Minutes
 Sample Type: Feces Species: Dog & Cat
 Shelf Life: 18 Months Storage: Room Temperature



| Species | Sample | Test | Antigen/ Antibody | Diseases | scil Code | Test/box |
|-----------|--------|--|----------------------|---|-----------|-------------|
| Dog | Feces | trūRapid FOUR | Ag Ab Ab Ab | Dirofilariasis Lyme Ehrlichiosis Anaplasmosis | 109442 | 10 |
| | | trūRapid FOUR Leish | Ag Ab Ab Ab | Dirofilariasis Leishmaniosis Ehrlichiosis Anaplasmosis | 109443 | 10 |
| | | trūRapid Anaplasma | Ab | Anaplasmosis | 109451 | 10 |
| | | trūRapid Ehrlichia | Ab | Ehrlichiosis | 109448 | 10 |
| | | trūRapid Heartworm Dirofilaria | Ab | Dirofilariasis | 109447 | 10 |
| | | trūRapid Leptospirosis | Ab | Leptospirosis | 109449 | COMING SOON |
| | | trūRapid Lyme | Ab | Lyme | 109450 | 10 |
| | | trūRapid Leishmania | Ab | Leishmaniosis | 109444 | 10 |
| Cat | Feces | trūRapid Canine Titer Test | Ab Ab Ab | Parvovirus Distemper Adenovirosis | 109453 | COMING SOON |
| | | trūRapid FIV/FelV | Ab Ag | FIV FelV | 109454 | 10 |
| Dog & Cat | Feces | trūRapid Feline Titer Test | Ab | Feline Panleukopenia | 109457 | COMING SOON |
| | | trūRapid Parvovirus Giardia Coronavirus | Ag Ag Ag | Parvovirus Giardiasis Coronavirosis | 109460 | 5 |
| | | trūRapid Parvovirus Giardia | Ag Ag | Parvovirus Giardiasis | 109463 | 5 |
| | | trūRapid Parvovirus | Ag | Parvovirus | 109461 | 5 |
| | | trūRapid Giardia | Ag | Giardiasis | 109462 | 5 |

* Coronavirus test is available only for dog



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