



Laboratory diagnosis of viral enteritis in dogs and cats



by Real-Time PCR



Canine parvovirus and feline panleukopenia

The causative agent of infection:

Canine parvovirus (CPV) and feline panleukopenia virus (FPV) are DNA viruses of the family Parvoviridae that are transmitted by contact and alimentary route. With FPV, intrauterine and transmissive transmission is also possible.

Relevance of diagnosis

- ✓ For cubs, an acute course of the disease is typical and leads to death within 24-72 hours
- ✓ Infection of pregnant cats with the panleukopenia virus leads to intrauterine fetal death
- ✓ Viruses also infect wild animals

Features of the disease

- ✓ First of all, there is infection of the lymphoid tissue, bone marrow, stomach, kidneys
- ✓ In parvovirus, myocardial damage in puppies is typical
- ✓ With proper diagnosis and treatment, the likelihood of recovery increases
- ✓ Panleukopenia is characterised by hidden "virus carriers"



Biological specimen

- Whole blood
- Blood serum/plasma
- Stool



Coronavirus enteritis in dogs and cats

The causative agent of infection:

Canine coronavirus (CCoV) and feline coronavirus (FCoV) are RNA viruses of the family *Coronaviridae* and the genus *Coronavirus* that are transmitted by contact route.

FCoV is represented by two biotypes: *FECV* - feline enteritis coronavirus, and *FIPV* - feline infectious peritonitis virus.

Relevance of diagnosis

- ✓ CCoV is highly infectious, causing death in the acute course of the disease, especially in puppies
- ✓ Coronaviruses in cats cause enteritis and infectious peritonitis, which are fatal

Features of the disease

- ✓ Adult animals are asymptomatic carriers of coronaviruses
- ✓ Symptoms in dogs are similar to those of parvovirus enteritis, adenovirus infection and distemper
- ✓ In 5-12% of cats carrying the virus, *FECV* mutates to pathogenic form of *FIPV* with the development of infectious peritonitis
- ✓ There is a much lower risk of complications with early diagnosis and treatment

Biological specimen

- Blood serum/plasma
- Ascitic fluid
- Saliva
- Stool



Advantages of PCR diagnostics:

- ✓ Fast receipt of the result
- ✓ Reliable diagnosis of infection
- ✓ Possibility to perform the test at any stage of the disease, even without clinical manifestations

Real-Time PCR is a direct method of diagnosis, so it is important to consider the following:

- ✓ Biological specimen is collected only from the site of the suspected localization of the infectious agent
- ✓ Repeated testing is carried out 2-3 weeks after the end of treatment or vaccinations
- ✓ A positive result in the absence of clinical signs of disease may indicate detection of a bacteria/virus vector

Features and advantages of RealBest-Vet diagnostic kits

- ✓ Ready Master Mix for PCR/RT-PCR: Simplification of analysis procedures and high stability of test quality
- ✓ Multiplexity: possibility of detecting two infections in one tube
- ✓ Universal protocol: all tests in one run
- ✓ Compatible devices: CFX96 (Bio-Rad, USA), DT-96 a DTprime (DNA-Technology, Russia), Gentier 96E/R (Xi'an TianLong, Science and Technology Co., Ltd., China)
- ✓ High stability of the kit: storage at a temperature of 2–8 ° C; transport up to 26 °C for not more than 10 days

RealBest-Vet diagnostic kits

Cat.No	Kit name and description	Number of tests
Extraction kits for the isolation of nucleic acids		
8889	RealBest DNA-express Rapid DNA extraction kit (15 minutes)	100
5453	RealBest-Vet Alpha DNA extraction kit, for use with KingFisher Flex system	96 (2x48)
5454	RealBest-Vet Beta DNA and RNA extraction kit, for use with KingFisher Flex system	96 (2x48)
5876	RealBest-Vet Gamma DNA and RNA extraction kit, for use with KingFisher Flex system	48 (4x12)
Dog and cat parvovirus and coronavirus detection kits		
5467	RealBest-Vet DNA CPV, FPV Canine parvovirus infection and feline panleukopenia detection kit	96
5468	RealBest-Vet RNA CCoV, FCoV Dog and cat coronavirus enteritis detection kit	96

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