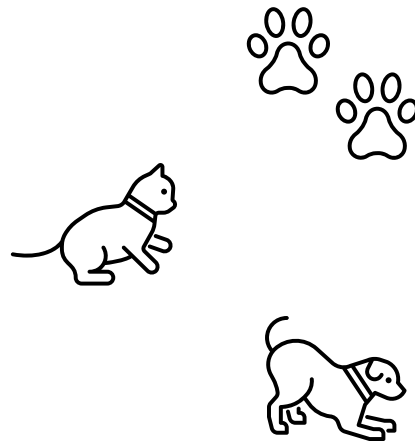


# Laboratory diagnosis of kennel cough

by Real-Time PCR



## Kennel cough in dogs

Kennel cough in dogs is a group of infectious diseases that manifest clinically as acute respiratory infections. Infection usually occurs in places with close contact of a large number of dogs, such as shelters, dog hotels or exhibitions. The ways of transmission of infection are mainly contact with an infected dog and also the common use of feeding bowls.



## The most widespread agents involved in the pathogenesis of kennel cough in dogs:

**CDV** (Canine Distemper Virus), distemper virus, *DNA virus*

**CAdV-2** (Canine Adenovirus-2), canine adenovirus type 2, *DNA virus*

**CHV-1** (Canine HerpesVirus-1), canine herpesvirus, *DNA virus*

**CPiV** (Canine ParainfluenzaVirus-1), canine parainfluenza virus, *RNA virus*

*Mycoplasma cynos* and *Chlamydia spp.*

*Bordetella bronchiseptica*

### Relevance of diagnostics

- ✓ Kennel cough is highly contagious respiratory disease rapidly transmitted between dogs
- ✓ In animals with weak immunity, the disease often leads to pneumonia and other serious diseases
- ✓ Dog breeds with short muzzles have a particularly hard time tolerating kennel cough
- ✓ Infection of female dogs during pregnancy can lead to the death of newborn puppies

### Indications for analysis:

- ✓ Presence of clinical manifestations
- ✓ Veterinary examination before the exhibition
- ✓ Examination of dogs before mating
- ✓ Preparation of veterinary certificate before sale
- ✓ Before vaccination

### Advantages of PCR diagnostics:

- ✓ Fast receipt of the results
- ✓ 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 vaccination
- ✓ A positive result in the absence of clinical signs of disease may indicate detection of a bacteria/virus vector

### Clinical manifestations:

- Cough
- Heavy breathing
- Increased body temperature
- Discharges from the eyes and nose
- Conjunctivitis
- Vomiting, diarrhea
- Neurological symptoms



### Biological specimen

- Nasal swabs
- Oropharyngeal swabs
- Conjunctival swabs



## 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.№	Kit name and description	Number of tests
<b>Extraction kits for isolation of nucleic acids</b>		
8889	<b>RealBest DNA-express</b> Rapid DNA extraction kit (15 minutes)	100
5453	<b>RealBest-Vet Alpha</b> DNA extraction kit, for use with KingFisher Flex system	96 (2x48)
5454	<b>RealBest-Vet Beta</b> DNA and RNA extraction kit, for use with KingFisher Flex system	96 (2x48)
5876	<b>RealBest-Vet Gamma</b> DNA and RNA extraction kit, for use with KingFisher Flex system	48 (4x12)
<b>Kits for detection of the causative agents of kennel cough</b>		
5404	<b>RealBest-Vet RNA CPiV</b> Canine parainfluenza virus RNA detection kit	96
5401	<b>RealBest-Vet RNA CDV</b> Distemper virus RNA detection kit	96
5421	<b>RealBest-Vet DNA CA<sub>d</sub>V-2</b> Canine adenovirus type 2 (infectious laryngotracheitis) DNA detection kit	96
5400	<b>RealBest-Vet DNA CHV-1</b> Canine alphaherpesvirus type 1 DNA detection kit	96
5475	<b>RealBest-Vet DNA Bordetella bronchiseptica</b> <i>Bordetella bronchiseptica</i> DNA detection kit	96
5412	<b>RealBest-Vet DNA Mycoplasma cynos</b> <i>Mycoplasma cynos</i> DNA detection kit	96
5465	<b>RealBest-Vet DNA Chlamydia spp.</b> <i>Chlamydia spp.</i> DNA detection kit	96

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