



"Ready & Easy-to-use" kits.  
Lyophilised product



Transport and storage at room temperature.  
Shelf-life: 24 months



CE marked

RESPIRATORY INFECTION  
**BDT**  
MULTIPLEX

## Bordetella

- ▶ The genus *Bordetella* is comprised of 8 species, 4 of which are known to infect humans; *B. pertussis*, *B. parapertussis*, *B. holmesii*, and *B. bronchiseptica*. The most important cause for whooping cough (pertussis) is *B. pertussis*, followed by *B. parapertussis*. *Bordetella holmesii* has been isolated from patients with a serious underlying disease, whereas *B. bronchiseptica* is usually restricted to animals but occasionally has also been isolated from immunocompromised patients.
- ▶ **Pertussis is a very contagious** disease which spreads from person to person usually by coughing or sneezing or when spending a lot of time near one another where you share breathing space. The clinical course of the illness is divided into three stages which include the following clinical features: catarrhal (coryza, low-grade fever, mild and occasional cough), paroxysmal (paroxysms of numerous and rapid coughs, cyanosis, vomiting and exhaustion) and convalescent (gradual recovery and less persistent paroxysmal coughs).

Despite vaccination **pertussis remains endemic in most areas of the world**. Reliable diagnosis is required to start appropriate treatment and prophylaxis of contacts if needed, particularly non vaccinated infants in whom pertussis might present as a life-threatening disease. Nucleic acid amplification tests, including PCR and more recently real-time PCR, overcome some of the limitations of culture and serological methods for the diagnosis of *Bordetella* infections.

- ▶ **VIASURE *Bordetella* Real Time PCR Detection Kit** is designed for the diagnosis of *Bordetella pertussis*, *Bordetella parapertussis* and/or *Bordetella holmesii* in respiratory samples. After DNA isolation, the identification of *Bordetella pertussis* / *Bordetella holmesii* is performed by the amplification of a conserved region of the insertion sequence IS481, *Bordetella holmesii* of the insertion sequence hIS1001 and *Bordetella parapertussis* of the insertion sequence pIS1001 using specific primers and fluorescent-labeled probes.

## Bordetella

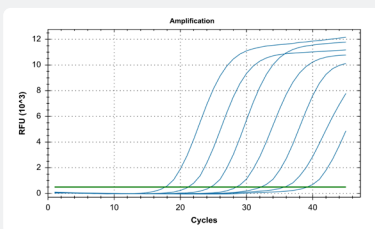
**VIASURE Bordetella Real Time PCR Detection Kit** is designed for the specific identification and differentiation of *Bordetella pertussis*, *Bordetella parapertussis* and/or *Bordetella holmesii* in respiratory samples from patients with signs and symptoms of respiratory infection.

**This test is intended for use as an aid in the diagnosis of *Bordetella* in combination with clinical and epidemiological risk factors.**

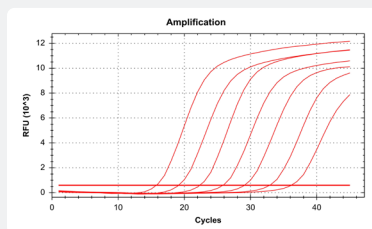
DNA is extracted from specimens, multiplied using Real Time amplification and detected using specific primers and a fluorescent reporter dye probe for *Bordetella pertussis/holmesii*, *Bordetella holmesii* and/or *Bordetella parapertussis*.

### ► Analytical sensitivity

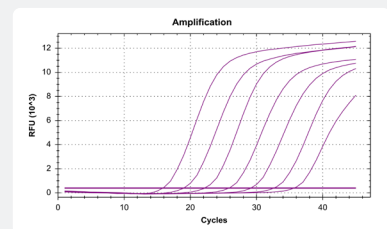
The linearity of the assay was determined and confirmed by testing series of ten-fold dilutions containing a known concentration (ranging from  $10^7$  to  $10^1$  copies per reaction) of specific and synthetic DNA belonging to *B. pertussis*, *B. holmesii* and *B. parapertussis* (Figure 1,2 and 3).



**Figure 1.**  
Dilution series of *Bordetella pertussis/holmesii* ( $10^7$ – $10^1$  copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (FAM channel).



**Figure 2.**  
Dilution series of *Bordetella holmesii* ( $10^7$ – $10^1$  copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (ROX channel).



**Figure 3.**  
Dilution series of *Bordetella parapertussis* ( $10^7$ – $10^1$  copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Cy5 channel).

Analytical sensitivity or limit of detection (LoD) of **VIASURE Bordetella Real Time PCR Detection Kit** was analysed using pernasal swabs, nasopharyngeal swabs and nasopharyngeal aspirates.