

***Bordetella pertussis* and *Bordetella parapertussis*, Molecular Detection, PCR, Varies**

Test ID: BPRPV

Useful for:

Preferred diagnostic test for the detection of *Bordetella pertussis* or *Bordetella parapertussis*.

This test is not recommended for screening asymptomatic individuals who may carry *B. pertussis* or *parapertussis*.

This test is not recommended for follow up of patients previously diagnosed with pertussis (ie, as a test of cure).

Methods:

Polymerase Chain Reaction (PCR)/DNA Probe Hybridization

Reference Values:

Not applicable

Specimen Requirements:

The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by *Bordetella pertussis* or *Bordetella parapertussis* DNA is unlikely.

Submit only 1 of the following specimens:

Preferred:

Specimen Type: Nasopharyngeal swab

Supplies: Culture Swab - Liquid Stuarts/Single Swab (NP Swab) (T515)

Container/Tube: Rayon swab with an aluminum shaft placed in transport medium such as a green-top nasopharyngeal swab (rayon mini-tip) with Stuart's media (no charcoal), or Stuart's media with charcoal, or Amies media with or without charcoal (Transwab Nasopharyngeal with Charcoal System).

Additional Information: 1. Swab transport containers without charcoal must contain a pledget saturated with either Stuart's or Amies liquid media. Clear semi-solid/solid media is gel and will be rejected.

2. Other swab or media types may be inhibitory to PCR testing and will be rejected.

Acceptable:

Specimen Type: Nasopharyngeal (not throat) aspirate/wash or nasal aspirate/wash

Container/Tube: Sterile container with a screw top cap (no transport media)

Specimen Volume: Entire collection

Minimum Volume: 0.5 mL

Specimen Stability Information:

| Specimen Type | Temperature | Time |
|---------------|--------------------------|--------|
| Varies | Refrigerated (preferred) | 7 days |
| | Ambient | 7 days |
| | Frozen | 7 days |

Necessary Information:

Specimen source is required.

Cautions:

Cross-reactivity with *Bordetella holmesii* may occur with the *Bordetella pertussis* polymerase chain reaction (PCR) assay. The prevalence of *B holmesii* is relatively low, with positivity in less than 1% of nasopharyngeal swabs.(2) Note: *B holmesii* has been associated with pertussis-like symptoms.(2)

Cross-reactivity of the *B pertussis* assay has been demonstrated with a limited number of *Bordetella bronchiseptica* isolates. The prevalence of the insertion sequence target, IS481, has been reported to be between 1% and 5% in *B bronchiseptica* isolates.

Some *B pertussis* acellular vaccines (ie, Pentacel, Daptacel, Adacel) contain PCR detectable DNA. Contamination of specimens with vaccine can cause false-positive *B pertussis* PCR results. Specimens should not be collected or processed in areas that are exposed to *B pertussis* vaccine material.

CPT Code:

87798 x 2

Day(s) Performed: Monday through Friday, Sunday **Report Available:** 1 to 3 days

Questions

Contact James Conn, Laboratory Technologist Resource Coordinator at 800-533-1710.