Parapertussis

General:

Bordetella is a genus of small (0.2 - 0.7 µm), Gram-negative coccobacilli of the phylum proteobacteria. Bordetella species, with the exception of B. petrii, are obligate aerobes as well as highly fastidious and difficult to culture. Three species are human pathogens (B. pertussis, B. parapertussis, B. bronchiseptica).

Transmission occurs by direct contact, or via respiratory aerosol droplets, or fomites. Bacteria initially adhere to ciliated epithelial cells in the nasopharynx and this interaction with epithelial cells is mediated by a series of protein adhesins. These include filamentous hemagglutinin, pertactin, fimbriae, and pertussis toxin (though expression of pertussis toxin is unique to B. pertussis). As well as assisting in adherence to epithelial cells, some of these are also involved in attachment to immune effector cells.

B. pertussis and occasionally B. parapertussis cause pertussis or whooping cough in humans, and some B. parapertussis strains can colonize sheep. B. bronchiseptica rarely infects healthy humans though disease in immunocompromised patients has been reported. B. bronchiseptica causes several diseases in other mammals, including kennel cough and atrophic rhinitis in dogs and pigs, respectively. Other members of the genus cause similar diseases in other mammals, and in birds (B. hinzii, B. avium).

The initial catarrhal phase of infection produces symptoms similar to those of the common cold and during this period, large numbers of bacteria can be recovered from the pharynx. Thereafter the bacteria proliferate and spread further into the respiratory tract, where the secretion of toxins causes ciliostasis and facilitates the entry of bacteria to tracheal/bronchial ciliated cells.

The following tests are available:

- **Bordetella pertussis-IgA antibodies**

  Material: 1 ml serum
  TAT: 5-7 days*
  Method: EIA
  Units: IU/ml
  Ref.- range: see report

- **Bordetella pertussis - IgG antibodies**

  Material: 1 ml serum
  Method EIA
  Units: IU/ml
  Ref.range: see report

- **Bordetella parapertussis DNA**

  Material: dry swab in PCR tube
  Method: PCR
  TAT: 5-7 days*
  Ref.- range: see report

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  Material: dry swab in PCR tube
  Method: PCR
  TAT: 5-7 days*
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For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit http://www.fml-dubai.com/parameter-listings/