ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Haemophilus influenzae

☐ Cat. # PHID11-S	Recombinant Haemophilus influenza Protein D antiserum	**SIZE**: 100 ul
☐ Cat. #PHID11-C	Recombinant Haemophilus influenza Protein D controls for western blot	**SIZE**: 100 ul

Haemophilus influenzae (formerly called Pfeiffer's bacillus or Bacillus influenzae) is a Gram-negative, coccobacillary, facultatively anaerobic bacterium belonging to the Pasteurellaceae family. H. influenzae is responsible for a wide range of localized and invasive infections. Two major categories of H. influenzae were defined: the unencapsulated strains and the encapsulated strains. Encapsulated strains were classified on the basis of their distinct capsular antigens. There are six generally recognized types of encapsulated H. influenzae: a, b, c, d, e, and f. Genetic diversity among unencapsulated strains is greater than within the encapsulated group. Unencapsulated strains are termed nontypable (NTHi) because they lack capsular serotypes; however, they can be classified by multilocus sequence typing. Six typeable capsular serotypes (a-f) are known to cause disease; non-typeable encapsulated strains can occasionally cause invasive disease. The capsular polysaccharide structures of the six types are likely related to the virulence properties of H. influenzae. Hib capsular polysaccharide confers virulence by "shielding" the deeper bacterial structures such as the lipopolysaccharide from the lytic activity of complement.

The most virulent strain is H. influenzae type b (Hib), which accounts for more than 95% of H. influenzae infections in children and half of infections in adults. Hib may cause bacteraemia, meningitis, cellulitis, epiglottitis, septic arthritis, pneumonia, pleural or gallbladder empyema, endophthalmitis, urinary tract infection, abscesses, cervical adenitis, glossitis, osteomyelitis and endocarditis. . *H. influenzae* genome consists of 1,830,140 base pairs of DNA in a single circular chromosome that contains 1740 protein-coding genes, 2 transfer RNA genes, and 18 other RNA genes.

H.influenzae is clinically diagnosed by bacterial culture or latex particle agglutination test (LAT). LAT is more sensitive method than culture since it depends on the presence of antigen rather than bacteria therefore dependence on viability of bacteria does not pertain. However, PCR assay is the most reliable and sensitive assay then LAT or culture tests. Hib vaccines cost about seven times the total cost of vaccines against measles, polio, tuberculosis, diphtheria, tetanus, and pertussis. Consequently, whereas 92% of the populations of developed countries were vaccinated against Hib as of 2003, vaccination coverage was 42% for developing countries, and only 8% for least-developed countries.

Source of Antigen and Antibodies

Antigen	Recombinant purified PHID GP ~41.2 kDa (364 aa)
Ab Host/type	Rabbit, polyclonal, Unpurified antiserum (**cat # PHID11-S**)
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	**# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control**

PHID GP is expressed in *E.coli* and purified using proprietary technique (>95%, ~41.2 kDa). Purified **recombinant *H.influenzae* PHID for Western blot +ve control (#PHID11-C)** is supplied in SDS-PAGE sample buffer. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels.

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

☐ 100ul ☐ ☐ solution ☐ lyophilized powder

Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4oC or -20oC.

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

ELISA, Western blot

Cellular Activity

Specificity & Cross-reactivity

H.influenzae (PHID, 364-aa, protein accession #Q06282) is conserved in *H influenzae* (100%), *H aegyptius* (99%), *H haemolyticus* (99%) *and H.parasuis* (83%).

General References: Song, XM, Forsgren, A, Janson, H (1995) Infect. Immun. 63, 696-699; Janson, H, Heden, LO, Forsgren, A (1992) Infect. Immun. 60, 1336-1342.

**This product is for In vitro research use only.*

Related material available from ADI

Catalog#	Prod Description
980-HIB-AG1	Human Anti-H. Influenzae B (Hib) polyribosyl phosphate (PRP) antigen (vaccine) ELISA Kit, 96 tests
980-100-PHG	Human Anti-H. Influenzae B polyribosyl phosphate (Hib-PRP) IgG ELISA Kit, 96 tests
980-110-PHM	Human Anti-H. Influenzae B polyribosyl phosphate (Hib-PRP) IgM ELISA Kit, 96 tests
980-200-PDG	Human Anti-H. Influenzae protein D (Non-typeable, NT-PHiD) IgG ELISA Kit, 96 tests
980-200-PDM	Human Anti-H. Influenzae protein D (Non-typeable, NT-PHiD) IgM ELISA Kit, 96 tests
980-VID-Hib-48	ID-VAC H. Influenzae B (Hib-PRP) vaccine Identification ELISA Kit (Confirm the presence of active ingredients in commercial vaccines), 48 tests
980-VID-Hib-96	ID-VAC H. Influenzae B (Hib-PRP) vaccine Identification ELISA Kit (Confirm the presence of active ingredients in commercial vaccines), 96 tests

PHID11-S-antiserum 160314AC

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