ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Recombinant H. influenzae protein D (Non-typeable, NT-PHID)

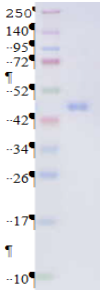
Cat # PHID15-R-10 Recombinant H. Influenzae protein D purified PHID protein (>95%, 6x His-tag) **Size**: 10 ug

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



Recombinant PHID glycoprotein was expressed in E.coli as a his-tag fusion protein (364 aa, >95%, ~42.0 kda). Purified protein is supplied in 50 mM Tris-HCl, 8M urea, 0.5 mM EDTA, 5 mM β-Mercaptoethanol, 0.25 M NaCl and 0.25 M Imidazole (see lot sp. Conc. on the vial)

Endotoxin level : < 1.0 EU per µg protein as determined by the LAL method.

It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Storage
Short-term: unopened, undiluted vials for less than a week at **4°C.**

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 **–20°C** or below.
Shipping: 4°C for solutions and room temp for powder.

Recommended Usage
ELISA, Western blot

Cellular Activity, Histochemistry & Immunofluorescence

Specificity:
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
980-100-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
980-250-PDG	Monkey Anti-H. Influenzae protein D (Non-typeable, NT-PHiD) IgG ELISA Kit, 96 tests
980-120-PMG	Mouse Anti-H. Influenzae B polyribosyl phosphate (Hib-PRP) IgG ELISA Kit, 96 tests
980-220-PDG	Mouse Anti-H. Influenzae protein D (Non-typeable, NT-PHiD) IgG ELISA Kit, 96 tests
980-130-PRG	Rabbit Anti-H. Influenzae B polyribosyl phosphate (Hib-PRP) IgG ELISA Kit, 96 tests
980-140-PRM	Rabbit Anti-H. Influenzae B polyribosyl phosphate (Hib-PRP) IgM ELISA Kit, 96 tests
980-230-PDG	Rabbit Anti-H. Influenzae protein D (Non-typeable, NT-PHiD) IgG ELISA Kit, 96 tests
PHID11-C	Recombinant H. Influenzae protein D (Non-typeable, NT-PHiD) controls for western blot

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