

Bordetella pertussis

ELISAs.

INFECTIOUS DISEASES

Manufactured by

IBL International GmbH
Flughafenstrasse 52a
D-22335 Hamburg
Germany

Phone: +49 (0)40-53 28 91-0
Fax: +49 (0)40-53 28 91-11
Email: IBL@Tecan.com
www.tecan.com/immunoassays

IBL
INTERNATIONAL
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Australia +61 3 9647 4100 **Austria** +43 62 46 89 33 **Belgium** +32 15 42 13 19 **China** +86 21 220 63 206 **Denmark** +45 70 23 44 50 **France** +33 4 72 76 04 80
Germany +49 6134 1814 30 **Italy** +39 02 92 44 790 **Japan** +81 44 556 73 11 **Netherlands** +31 18 34 48 17 4 **Singapore** +65 644 41 886 **Spain** +34 93 490 01 74
Sweden +46 31 75 44 000 **Switzerland** +41 44 922 89 22 **UK** +44 118 9300 300 **USA** +1 919 361 5200 **Other countries** +43 62 46 89 33

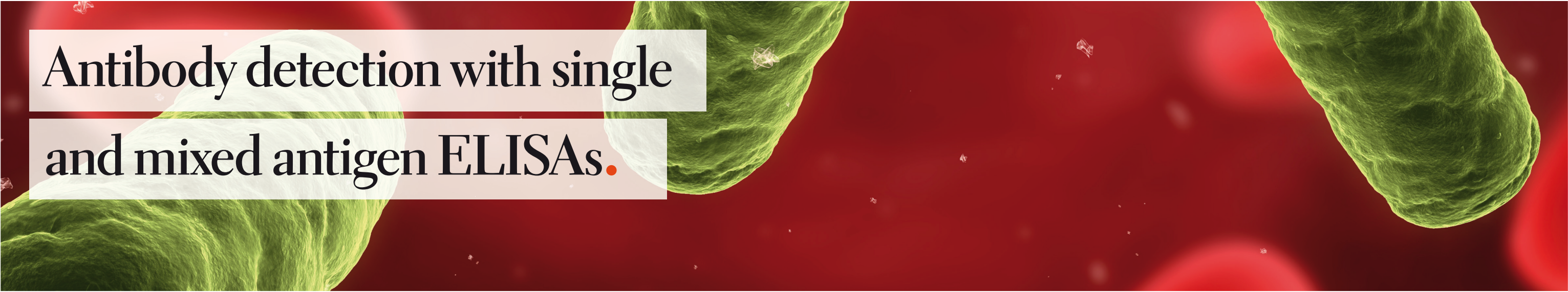
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Bordetella pertussis EN 2016 V01



Antibody detection with single and mixed antigen ELISAs.

Pertussis, also known as whooping cough, is a respiratory infection that causes a persistent cough that may affect all age groups.

The serology of a pertussis infection is significantly improved by the detection of antibodies directed against molecules that are produced by Bordetella bacteria, like pertussis toxin (PT), filamentous haemagglutinin (FHA) and various lipopolysaccharides (LPS). These compounds appear in the serum upon infection or vaccination. PT is specific for Bordetella pertussis, whereas FHA is produced by Bordetella pertussis and Bordetella parapertussis. Nearly all acellular vaccines licensed in Europe contain substantial amounts of PT and FHA. Therefore, over 90% of immune responses are directed against PT and FHA.

IBL International offers single antigen (PT or FHA) and classic mixed antigen (PT + FHA) Bordetella (IgA, IgG and IgM) ELISAs

- Identical easy-to-perform test procedure for all Bordetella assays
- Qualitative or quantitative analysis
- Evaluated for serum and plasma samples
- High analytical sensitivity: broad linear test range
- High diagnostic specificity: >95%
- Single antigen assays calibrated to the 1st Int. Standard WHO 06/140

PRODUCTS

Single antigen ELISAs

RE56061
Bordetella PT IgG ELISA

RE56051
Bordetella PT IgA ELISA

RE56091
Bordetella FHA IgG ELISA

RE56081
Bordetella FHA IgA ELISA

Mixed antigen ELISAs

RE56131
Bordetella pertussis IgA ELISA

RE56141
Bordetella pertussis IgG ELISA

RE56151
Bordetella pertussis IgM ELISA

The mixed antigen ELISAs (PT + FHA + LPS, Tohama strain) are intended for monitoring immunostatus following vaccination, differential diagnosis of acute and recent infections as well as epidemiological studies.

SEROLOGY OF PERTUSSIS INFECTION

For the serology of an acute pertussis infection, it is generally sufficient to measure IgG antibodies against PT. It allows a clear differentiation of an infection with Bordetella pertussis from Bordetella parapertussis and is useful to assess the immunostatus after vaccination. The results are interpreted according to the following scheme:

PT-Ab levels (IU/mL)	Interpretation
<40	No acute infection; further tests only necessary when corresponding symptoms are present
40 - 100	Unclear; repeat the test several days later
>100	Acute infection or recent vaccination

Anti-FHA antibodies occur after infection with both Bordetella pertussis and Bordetella parapertussis as well as after vaccination. Positive FHA antibody titers, in combination with the absence of PT antibodies, indicate an infection with Bordetella parapertussis.

Method comparison

Direct method comparison shows similar diagnostic specificity and sensitivity between the IBL International Bordetella PT IgG ELISA and a commercially available Bordetella PT IgG ELISA.

(N=53 samples)		Commercial Bordetella PT IgG ELISA		
IBL International Bordetella PT IgG ELISA	IU/mL	<40	40 - 100	>100
	<40	37	1	
	40 - 100		3	1
	>100			11