

## SUMMARY OF DIAGNOSTIC TESTS FOR PERTUSSIS

Compiled by CDC's Pertussis and Diphtheria Laboratory

Test	Sensitivity <sup>2,3</sup>	Specificity <sup>2,3</sup>	Optimal Timing	Advantages	Disadvantages
<b>Culture</b>	12 – 60%	100%	< 2 weeks post-cough onset	Very specific (100%)	Low sensitivity; 7-10 day delay between specimen collection and diagnosis
<b>PCR</b>	70 – 99%	86 – 100%	< 4 weeks post-cough onset	Rapid test; more sensitive than culture; organisms do not need to be viable; positive post-antibiotics	No FDA approved tests or standardization; potential for false positives; DNA cross-contamination can be problematic
<b>Paired<sup>1</sup> Sera</b>	90 – 92%	72 – 100%	At symptom onset and 4-6 weeks later	Effective indication of mounting antibody titers	Late diagnosis; no FDA approved tests or standardization
<b>Single<sup>1</sup> Sera</b>	36 – 76%	99%	At least 2 weeks post-cough onset; ideally 4-8 weeks post-cough	Useful for late diagnosis or post-antibiotics	No FDA approved test or standardization; possibly confounded by recent vaccination; diagnostic cut-offs not validated

1 Not part of the CDC/CSTE Case Definition (Exception: MA single point ELISA assay)

2 Sensitivity and specificity values obtained from Wendelboe and Van Rie, 2006

3 Data currently being validated at CDC (except paired sera)

Adapted from “What’s All The Whoop About”

Association of Public Health Laboratories; May 2010

[http://www.aphl.org/aphlprograms/infectious/Documents/Pertussis\\_Brochure-Final3.pdf](http://www.aphl.org/aphlprograms/infectious/Documents/Pertussis_Brochure-Final3.pdf)