

**PCR-/NAT *Bordetella pertussis***  
**(RV 532) Mai 2023**



**Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.**

*Sample composition and expected results.*

Proben Nr.	Erwartet / expected		Probenzusammensetzung / Sample composition
532 230523 01	<b>+</b>	<b>61</b>	<i>Bordetella pertussis</i> (~ 5x10 <sup>3</sup> CFU/mL)
532 230523 02	<b>++</b>	<b>61</b>	<i>Bordetella pertussis</i> (~ 5x10 <sup>4</sup> CFU/mL)
532 230523 03	<b>(+)</b>	<b>61</b>	<i>Bordetella pertussis</i> (~ 2x10 <sup>3</sup> CFU/mL)
532 230523 04	<b>Ø</b>	<b>62</b>	<i>Escherichia coli</i> K12

**Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.**

*Absolute numbers of reported individual results.*

<b>n = 168</b>	<b>Proben Nr. (Sample no.)</b>				<b>Inhibition</b>				
	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	
<b>Befund</b> <i>Result</i>									
<b>Positiv</b>	<b>139</b>	<b>167</b>	<b>81</b>	<b>0</b>	n.d.	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Negativ</b>	<b>28</b>	<b>1</b>	<b>85</b>	<b>168</b>	nein <i>no</i>	<b>166</b>	<b>166</b>	<b>166</b>	<b>166</b>
<b>Fraglich</b> <i>Questionable</i>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	ja <i>yes</i>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.**

*Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.*

<b>NAT-Methode</b> [Code] (total number *)	<b>NAT richtig positiv</b> <i>True positive results</i>						<b>NAT richtig negativ</b>	
	<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>	
	<b>Absolut</b> <i>Absolute</i>	<b>%</b>	<b>Absolut</b> <i>Absolute</i>	<b>%</b>	<b>Absolut</b> <i>Absolute</i>	<b>%</b>	<b>Absolut</b> <i>Absolute</i>	<b>%</b>
<b>AID CAP Bacteria (n = 6)</b>	<b>5</b>	<b>83</b>	<b>6</b>	<b>100</b>	<b>3</b>	<b>50</b>	<b>6</b>	<b>100</b>
<b>ARGENE Bordetella R-GENE (n = 2)</b>	<b>2</b>	<b>100</b>	<b>2</b>	<b>100</b>	<b>1</b>	<b>50</b>	<b>2</b>	<b>100</b>
<b>Altona diag. RealStar Bordetella (n = 5)</b>	<b>5</b>	<b>100</b>	<b>5</b>	<b>100</b>	<b>3</b>	<b>60</b>	<b>5</b>	<b>100</b>
<b>AmpliGnost B.pert. / B.parapert. (n = 2)</b>	<b>1</b>	<b>50</b>	<b>2</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>100</b>
<b>Bio-Evolution B. pert. / B. parapert. (n = 3)</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>
<b>BioGX Bordet. Speciation plus toxin (n = 6)</b>	<b>6</b>	<b>100</b>	<b>6</b>	<b>100</b>	<b>5</b>	<b>83</b>	<b>6</b>	<b>100</b>
<b>FILMARRAY Resp. Panel 2.1 plus (n = 3)</b>	<b>2</b>	<b>67</b>	<b>3</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>100</b>
<b>Bruker-HAIN FluoroType Bordetella (n = 6)</b>	<b>6</b>	<b>100</b>	<b>6</b>	<b>100</b>	<b>4</b>	<b>67</b>	<b>6</b>	<b>100</b>

<b>DiaSorin Simplexa Bordetella Direct (n = 5)</b>	<b>5</b>	<b>100</b>	<b>5</b>	<b>100</b>	<b>2</b>	<b>40</b>	<b>5</b>	<b>100</b>
<b>GeneProof B. pert. / B. parapert. (n = 10)</b>	<b>7</b>	<b>70</b>	<b>10</b>	<b>100</b>	<b>2</b>	<b>20</b>	<b>10</b>	<b>100</b>
<b>HOLOGIC Panther Bordetella (n= 5)</b>	<b>5</b>	<b>100</b>	<b>5</b>	<b>100</b>	<b>3</b>	<b>60</b>	<b>5</b>	<b>100</b>
<b>Ingenetix BactoReal B. pertussis (n = 1)</b>	<b>1</b>	<b>100</b>	<b>1</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>100</b>
<b>ampliCube Resp. panel 2 (n = 16)</b>	<b>16</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>12</b>	<b>75</b>	<b>16</b>	<b>100</b>
<b>Meridian Alethia Pertussis (n = 3)</b>	<b>3</b>	<b>100</b>	<b>3</b>	<b>100</b>	<b>2</b>	<b>67</b>	<b>3</b>	<b>100</b>
<b>Solana Bordetella complete assay (n = 2)</b>	<b>2</b>	<b>100</b>	<b>2</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>100</b>
<b>Seegene Allplex Pneumobacter (n = 5)</b>	<b>4</b>	<b>80</b>	<b>5</b>	<b>100</b>	<b>4</b>	<b>80</b>	<b>5</b>	<b>100</b>
<b>Seegene Allplex Resp. Panel 4 (n = 18)</b>	<b>6</b>	<b>33</b>	<b>18</b>	<b>100</b>	<b>3</b>	<b>17</b>	<b>18</b>	<b>100</b>
<b>LightMix B. pert. (n = 5)</b>	<b>4<sup>§</sup></b>	<b>100</b>	<b>5</b>	<b>100</b>	<b>1<sup>§</sup></b>	<b>25</b>	<b>5</b>	<b>100</b>
<b>RIDAGENE Bordetella (n = 17)</b>	<b>17</b>	<b>100</b>	<b>17</b>	<b>100</b>	<b>6<sup>§</sup></b>	<b>38</b>	<b>17</b>	<b>100</b>
<b>In house PCR assay [28] (n = 31)</b>	<b>28</b>	<b>90</b>	<b>31</b>	<b>100</b>	<b>18</b>	<b>58</b>	<b>31</b>	<b>100</b>
<b>Other commercial tests (n = 17)</b>	<b>11</b>	<b>65</b>	<b>16</b>	<b>94</b>	<b>9</b>	<b>53</b>	<b>17</b>	<b>100</b>

<sup>§</sup> Fraglich Due to reporting questionable results, the number of true results has been reduced.

#### Comments:

1. The following tests are listed under "Other commercial tests": QIAGEN QIAstat-Dx Respiratory Sars CoV-2 panel (3x), Genetic Signatures EasyScreen Respiratory pathogens kit (2x), Altona FlexStar Bordetella PCR Detection Mix (1x), AusDiagnostics Respiratory pathogens B (1x), PathoFinder RespiFinder 2Smart (1x), Luminex ARIES Bordetella Assay (1x), Hola Bordetella Lyo PCR Kit (1x), PerfeCTa qPCR ToughMix (1x), ELITechGroup Bordetella ELITE MGB Kit (1x) and Gerbion Diarella Bordetella (1x).