

PCR-/NAT *Bordetella pertussis*
(RV 532) November 2024



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

| Proben Nr. | Erwartet / expected | | Probenzusammensetzung / Sample composition |
|----------------|---------------------|----|--|
| 532A 241015 01 | +++ | 61 | <i>Bordetella pertussis</i> (~ 5x10 ⁵ CFU/mL) |
| 532A 241015 02 | ∅ | 62 | <i>Escherichia coli</i> K12 |
| 532A 241015 03 | +++ | 61 | <i>Bordetella pertussis</i> (~ 1x10 ⁶ CFU/mL) |
| 532A 241015 04 | ++ | 61 | <i>Bordetella pertussis</i> (~ 5x10 ⁴ CFU/mL) |

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

| n = 152 | Proben Nr. (Sample no.) | | | | Inhibition | | | | |
|--|-------------------------|-----|-----|-----|-------------------|-----|-----|-----|-----|
| | 01 | 02 | 03 | 04 | 01 | 02 | 03 | 04 | |
| Befund <i>Result</i> | | | | | | | | | |
| Positiv | 152 | 0 | 152 | 144 | n.d. | 2 | 2 | 2 | 2 |
| Negativ | 0 | 152 | 0 | 8 | nein <i>no</i> | 150 | 150 | 150 | 150 |
| Fraglich <i>Questionable</i> | 0 | 0 | 0 | 0 | ja <i>yes</i> | 0 | 0 | 0 | 0 |

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.

| NAT-Methode [Code] (total number *) | NAT richtig positiv <i>True positive results</i> | | | | | | NAT richtig negativ | |
|---|---|-----|----------------------------|-----|----------------------------|-----|----------------------------|-----|
| | 01 | | 03 | | 04 | | 02 | |
| | Absolut <i>Absolute</i> | % | Absolut <i>Absolute</i> | % | Absolut <i>Absolute</i> | % | Absolut <i>Absolute</i> | % |
| AID CAP Bacteria (n= 4) | 4 | 100 | 4 | 100 | 4 | 100 | 4 | 100 |
| ARGENE Bordetella R-GENE (n= 1) | 1 | 100 | 1 | 100 | 1 | 100 | 1 | 100 |
| Altona diag. RealStar Bordetella (n= 5) | 5 | 100 | 5 | 100 | 5 | 100 | 5 | 100 |
| AmpliGnost B.pert. / B.parapert. (n= 1) | 1 | 100 | 1 | 100 | 1 | 100 | 1 | 100 |
| AusDiagnostics Resp. Pathogens 24-well (n= 1) | 1 | 100 | 1 | 100 | 1 | 100 | 1 | 100 |
| BioGX Bordet. Speciation plus toxin (n= 6) | 6 | 100 | 6 | 100 | 6 | 100 | 6 | 100 |
| FILMARRAY Resp. Panel 2.1 plus (n= 1) | 1 | 100 | 1 | 100 | 1 | 100 | 1 | 100 |

| | | | | | | | | |
|---|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| DiaSorin Simplexa Bordetella Direct (n= 8) | 8 | 100 | 8 | 100 | 8 | 100 | 8 | 100 |
| GeneProof B. pert. / B. parapert. (n= 5) | 5 | 100 | 5 | 100 | 5 | 100 | 5 | 100 |
| HOLOGIC Panther Bordetella (n= 7) | 7 | 100 | 7 | 100 | 7 | 100 | 7 | 100 |
| ampliCube Resp. panel 2 (n= 16) | 16 | 100 | 16 | 100 | 16 | 100 | 16 | 100 |
| Meridian Alethia Pertussis (n= 2) | 2 | 100 | 2 | 100 | 2 | 100 | 2 | 100 |
| QIAstat-Dx Resp. Sars CoV-2 panel (n= 2) | 2 | 100 | 2 | 100 | 2 | 100 | 2 | 100 |
| Solana Bordetella complete assay (n= 3) | 3 | 100 | 3 | 100 | 3 | 100 | 3 | 100 |
| Seegene Allplex Pneumobacter (n= 9) | 9 | 100 | 9 | 100 | 9 | 100 | 9 | 100 |
| Seegene Allplex Resp. Panel 4 (n= 20) | 20 | 100 | 20 | 100 | 13 | 65 | 20 | 100 |
| LightMix B. pertussis. (n= 5) | 5 | 100 | 5 | 100 | 5 | 100 | 5 | 100 |
| RIDAGENE Bordetella (n= 20) | 20 | 100 | 20 | 100 | 20 | 100 | 20 | 100 |
| In house PCR assay [28] (n= 24) | 24 | 100 | 24 | 100 | 23 | 96 | 24 | 100 |
| Other commercial tests (n= 12) | 12 | 100 | 12 | 100 | 12 | 100 | 12 | 100 |

The following tests are listed under "Other commercial tests": AB Analytica RQ ResP-BORD (1x), Altona FlexStar Bordetella PCR Detection Mix (1x), Anatolia Geneworks Bosphore B. pertussis/parapertussis Genotyping Kit (1x), BioGX Bordetella pertussis/parapertussis (1x), CerTest VIASURE Bordetella Real Time PCR Detection Kit (3x), PathoFinder RespiFinder 2Smart (1x), Vitassay qPCR B. pertussis, B. parapert, B.holmesii Kit (1x) and TIB Molbiol LightMix Modular (1x).