

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



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

Proben Nr.	Erwartet / expected		Probenzusammensetzung / Sample composition
532 231024 01	∅	62	<i>Bordetella parapertussis</i> (~ 5x10 ⁴ CFU/mL)
532 231024 02	∅	62	<i>Escherichia coli</i> K12
532 231024 03	++	61	<i>Bordetella pertussis</i> (~ 1x10 ⁴ CFU/mL)
532 231024 04	∅	62	<i>Bordetella bronchiseptica</i> (~ 5x10 ⁴ CFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

n = 154	Proben Nr. (Sample no.)				Inhibition				
	Befund Result	01	02	03	04	01	02	03	04
Positiv	10	2	135	7	n.d.	2	2	2	2
Negativ	144	152	18	147	nein no	152	152	152	152
Fraglich Questionable	0	0	1	0	ja yes	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwenden 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		NAT richtig negativ True negative results					
	03		01		02		04	
	Absolut Absolute	%	Absolut Absolute	%	Absolut Absolute	%	Absolut Absolute	%
AID CAP Bacteria (n = 5)	5	100	5	100	5	100	5	100
ARGENE Bordetella R-GENE (n = 3)	3	100	2	67	3	100	2	67
Altona diag. RealStar Bordetella (n = 3)	3	100	3	100	3	100	3	100
AmpliGnost B.pert. / B.parapert. (n = 2)	2	100	2	100	2	100	2	100
Bio-Evolution B. pert. / B. parapert. (n = 1)	1	100	0	0	1	100	0	0
BioGX Bordet. Speciation plus toxin (n = 5)	5	100	4	80	5	100	4	80
FILMARRAY Resp. Panel 2.1 plus (n = 1)	0	0	1	100	1	100	1	100

Bruker-HAIN FluoroType Bordetella (n = 7)	7	100	7	100	7	100	7	100
DiaSorin Simplexa Bordetella Direct (n = 4)	3	75	4	100	4	100	4	100
GeneProof B. pert. / B. parapert. (n = 6)	4	67	4	67	6	100	6	100
HOLOGIC Panther Bordetella (n= 6)	6	100	6	100	6	100	6	100
Luminex ARIES Bordetella Assay (n = 2)	1	50	2	100	2	100	2	100
ampliCube Resp. panel 2 (n = 18)	18	100	18	100	18	100	18	100
Meridian Alethia Pertussis (n = 3)	3	100	3	100	3	100	3	100
Solana Bordetella complete assay (n = 4)	4	100	4	100	4	100	4	100
Seegene Allplex Pneumobacter (n = 6)	6	100	6	100	6	100	6	100
Seegene Allplex Resp. Panel 4 (n = 16)	10	63	15	94	16	100	15	94
LightMix B. pert. (n = 3)	2	67	2	67	3	100	2	67
RIDAGENE Bordetella (n = 20)	20	100	20	100	20	100	20	100
In house PCR assay [28] (n = 29)	27	93	29	100	28	97	29	100
Other commercial tests (n = 10)	5[§]	56	7	70	9	90	8	80

[§] 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 (2x), Genetic Signatures EasyScreen Respiratory pathogens kit (2x), Altona FlexStar Bordetella PCR Detection Mix (1x), PathoFinder RespiFinder 2Smart (1x), Luminex ARIES Bordetella Assay (1x), ELITechGroup Bordetella ELITe MGB Kit (1x), Bioexsen Bio-Speedy B.pertussis, B.parapertussis, B.bronchiseptica, B.holmesii Real-Time PCR (1x) and CerTest VIASURE Bordetella Real Time PCR Detection Kit (1x).
2. As sample # 532 231024 03 contained a low number of *Bordetella pertussis* target organisms, negative PCR results were not scored.