

PCR-/NAT Carbapenemasen (RV 544) Mai 2023



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

Proben Nr.	Erwartet / expected		Probenzusammensetzung / Sample composition
544 230523 01	+++	61 / 73	<i>K. pneumoniae</i> OXA-181 (~ 1x10 ⁷ genome copies/mL)
544 230523 02	∅	62	<i>Escherichia coli</i> K12
544 230523 03	+++	61 / 71	<i>C. freundii</i> KPC-18 (~ 1x10 ⁶ genome copies/mL)
544 230523 04	+++	61 / 75	<i>S. marcescens</i> NDM-1 (~ 1x10 ⁶ genome copies/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

n = 94	Proben Nr. (Sample no.)				Inhibition				
	01	02	03	04	01	02	03	04	
Befund <i>Result</i>									
Positiv	92	1	91	93	n.d.	0	0	0	0
Negativ	2	93	3	1	nein <i>no</i>	94	94	94	94
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 Carbapenemase (n= 3)	3	100	3	100	3	100	3	100
eazyplex superbug complete A/B/C (n= 8)	7	88	6	75	8	100	8	100
eazyplex superbug expert (n= 2)	2	100	2	100	2	100	2	100
BD MAX Check-Points CPO assay (n= 1)	1	100	1	100	1	100	1	100
Bruker Carbaplex IVD PCR (n= 1)	1	100	1	100	1	100	1	100
Cepheid Xpert Carba-R (n= 44)	44	100	44	100	44	100	44	100
Check Direct CPE oder MDR (n= 1)	1	100	1	100	1	100	1	100

Seegene Allplex Entero-DR (n= 10)	10	100	10	100	10	100	10	100
LightMix Modular Carbapenemase (n= 5)	5	100	5	100	5	100	5	100
In house PCR assay (n= 13)	12	92	13	100	13	100	13	100
Other commercial tests (n= 6)	6	100	5	83	5	83	5	83

Comments:

1. Ninety- three from 94 participants reported dedicated carbapenemase identification (carbapenemase genes) With the exception of three laboratories, all reported results were correct.
2. The following tests are listed under "Other commercial tests": BD Max CPO (2x), Amplex eazyplex SuperBug basic (2x), BioFire FILMARRAY Pneumonia Panel plus (Pneumoplus) (1x) and Genetic Signatures EasyScreen kit (1x).