

PCR-/NAT Carbapenemasen (RV 544) November 2023



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

Proben Nr.	Erwartet / expected		Probenzusammensetzung / Sample composition
544 231024 01	+++	61 / 73,75	<i>K. pneumoniae</i> NDM-1, OXA-48 (~ 1x10 ⁶ CFU/mL)
544 231024 02	+++	61 / 71	<i>K. pneumoniae</i> KPC-3 (~ 1x10 ⁶ CFU/mL)
544 231024 03	+++	61 / 77	<i>Enterobacter cloacae</i> Komplex GIM-1 (~ 1x10 ⁶ CFU/mL)
544 231024 04	∅	62	<i>Escherichia coli</i> K12

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

<i>n</i> = 92	Proben Nr. (Sample no.)					Inhibition			
	01	02	03	04		01	02	03	04
Befund <i>Result</i>									
Positiv	92	88	30	0	n.d.	0	0	0	0
Negativ	0	4	62	92	nein <i>no</i>	92	92	92	92
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 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 <i>True positive results</i>						NAT richtig negativ	
	01		02		03		04	
	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 = 12)	12	100	10	83	7	58	12	100
eazyplex superbug expert (n = 3)	3	100	3	100	1	33	3	100
BD MAX Check-Points CPO assay (n = 3)	3	100	3	100	0	0	3	100
Bruker Carbaplex IVD PCR (n = 1)	1	100	1	100	0	0	1	100
Cepheid Xpert Carba-R (n = 40)	40	100	39	98	4	10	40	100
Check Direct CPE oder MDR (n = 1)	1	100	1	100	0	0	1	100
Seegene Allplex Entero-DR (n = 9)	9	100	9	100	6	67	9	100

LightMix Modular Carbapenemase (n = 5)	5	100	5	100	0	0	5	100
<i>In house</i> PCR assay (n = 10)	10	100	10	100	7	70	10	100
Other commercial tests (n = 5)	5	100	4	80	2	40	5	100

Comments:

1. Ninety- one from 92 participants reported dedicated carbapenemase identification (carbapenemase genes) With the exception of four laboratories, all reported results were correct.
2. The following tests are listed under "Other commercial tests": Amplex eazyplex SuperBug CRE (1x), Amplex eazyplex SuperBug basic (2x), BioFire FILMARRAY Pneumonia Panel plus (Pneumoplus) (1x) and Genetic Signatures EasyScreen kit (1x).