

PCR-/NAT Carbapenemasen (RV 544) Juni 2017



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1715441	+++	61 / 72	<i>K. pneumoniae</i> VIM-2 (~ 1x10 ⁷ genome copies/mL)
1715442	+++	61 / 71,73	<i>K. pneumoniae</i> KPC-2 , OXA-48 (~ 1x10 ⁷ genome copies/mL)
1715443	∅	62	<i>Escherichia coli</i> K12
1715444	+++	61 / 75	<i>S. marcescens</i> NDM-1 (~ 1x10 ⁷ genome copies/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

<i>n = 77</i>	<i>Probennummer (Sample no.)</i>				<i>Inhibition</i>				
	<i>1715441</i>	<i>1715442</i>	<i>1715443</i>	<i>1715444</i>	<i>1715441</i>	<i>1715442</i>	<i>1715443</i>	<i>1715444</i>	
Befund <i>Result</i>									
Positiv	74	75 ²⁾	2 ³⁾	76	n.d.	1	1	1	1
Negativ	3 ¹⁾	1	75	1 ⁴⁾	nein <i>no</i>	76	76	76	76
Fraglich <i>Questionable</i>	0	1	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 <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
Check MDR Caba test [20] (n=2)	6	6 / 6	100	2	2 / 2	100
Check direct CPE oder MDR [21] (n=7)	20	20 / 21	95	6	6 / 7	86
Hyplex Superbug [22] (n=1)	3	3 / 3	100	1	1 / 1	100
Hyplex Eazyplex [23] (n=5)	14	14 / 15	93	5	5 / 5	100
LightMix (TIB Molbiol) [24] (n=6)	18	18 / 18	100	6	6 / 6	100
GeneXpert CarbaR [25] (n=37)	111	111 / 111	100	37	37 / 37	100
Commercial assay / kit [27] (n=8)	22	22 / 23 [§]	96	8	8 / 8	100
<i>In house</i> PCR assay [28] (n = 15)	43	43 / 45	96	14	14 / 15	93

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

*** Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.**
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants.

Comments:

- 1) Three participants have missed the VIM-2 gene in sample # 1715441.
- 2) Six participants have missed the KPC-2 gene in sample # 1715442.
- 3) One participant reported a false-positive result for KPC in sample # 1715443.
- 4) One participant has missed the NDM-1 gene in sample # 1715444.