

				cells/ml urine (counted)													
				NTC	0	0	4x10 ⁶ (30)	4x10 ⁴ (80)	4x10 ² (360)	4x10 ³ (4000)	4x10 ⁴	4x10 ⁵	4x10 ⁶	4x10 ⁷			
				Array	12	10	9	8	7	6	5	4	3	2	1		
				SNP													
Klebsiella pneumoniae, KPC-3	Qiagen 1	MM/PM	Sense	814	0.971	0.936	0.719	0.951	0.997	0.457	0.554	0.423	0.334	0.482	0.430		
			716	0.741	0.843	0.242	0.805	0.837	0.869	0.675	0.452	0.363	0.346	0.354			
			308	0.612	0.289	0.976	0.945	0.809	0.893	0.736	0.150	0.096	0.083	0.088			
		147	0.374	0.596	0.513	0.716	0.884	0.438	0.237	0.120	0.044	0.050	0.047				
		Anti-Sense	814	0.610	0.696	0.885	0.886	0.933	0.631	0.738	0.177	0.143	0.148	0.208			
		716	0.928	0.841	0.682	0.849	0.919	0.974	0.737	0.697	0.478	0.394	0.446				
	308	0.416	0.555	0.560	0.898	0.932	0.350	0.094	0.073	0.066	0.045	0.076					
	147	0.518	0.600	0.875	1.000	0.867	0.619	0.248	0.126	0.134	0.250	0.243					
	average absolute PM signal intensity	Sense	814	135	122	260	140	126	232	1454	2844	2599	5786	5456	156.9		
	716	141	102	385	137	98	103	243	511	1384	2145	2544	154.4				
	308	147	341	98	110	100	117	230	809	4302	3384	3180	162.3				
	147	307	300	177	181	165	245	456	1202	2786	2641	1889	411.6				
Anti-Sense	814	145	124	118	119	103	107	174	593	2719	2121	1421	163.0				
716	69	82	87	94	85	57	85	104	121	195	487	88.2					
308	323	188	175	134	143	302	1390	2424	1804	4422	5038	420.7					
147	411	245	156	151	189	230	640	6480	9793	12654	15420	487.5					
Variant Identified	Sense									KPC-3	KPC-3	KPC-3	KPC-3				
Anti-Sense										KPC-3	KPC-3	KPC-3	KPC-8				
Result	Variant Identified	Sense+Anti-Sense								KPC-3	KPC-3	KPC-3	KPC-3	←---			
CV (if SD > 30% of PM)				Sense	814		47.63	64.59			127.16						
				716			147.85			38.26							
				308													
				147		43.54											
				Anti-Sense	814			46.53	37.11								
				716			41.81							146.89			
				308													
				147													

Klebsiella pneumoniae, KPC-3	Qiagen 2	MM/PM	Sense	814	0.849	0.967	0.692	0.973	0.490	0.455	0.412	0.527	0.537	0.476	0.497	
			716	0.404	0.795	0.829	0.868	0.949	0.530	0.052	0.302	0.256	0.220	0.252		
			308	0.854	0.527	0.731	0.916	0.289	0.195	0.067	0.088	0.062	0.166	0.157		
		147	0.843	0.658	0.549	0.796	0.106	0.110	0.026	0.020	0.028	0.031	0.033			
		Anti-Sense	814	0.611	0.628	0.783	0.308	0.264	0.261	0.161	0.159	0.127	0.158	0.192		
		716	0.518	0.741	0.218	0.454	0.687	0.842	0.317	0.351	0.256	0.251	0.293			
	308	0.580	0.827	0.892	0.996	0.087	0.054	0.030	0.036	0.037	0.063	0.040				
	147	0.875	0.950	0.710	0.929	0.161	0.171	0.151	0.156	0.216	0.173	0.169				
	average absolute PM signal intensity	Sense	814	116	32	88	23	419	837	5454	10462	14141	6874	3897	185.2	
	716	194	27	49	24	86	158	797	3285	3520	2378	1542	253.2			
	308	195	32	49	22	217	360	1124	6670	6944	2617	3232	230.5			
	147	218	92	79	85	667	936	2252	4402	4732	1802	2135	365.3			
Anti-Sense	814	20	69	12	46	290	265	686	2800	2608	877	925	28.3			
716	50	24	54	23	12	18	31	136	173	45	39	97.8				
308	220	89	100	30	690	1291	6353	10419	13455	6428	3151	285.5				
147	263	83	145	37	399	667	8655	21847	28367	19419	11187	493.6				
Variant Identified	Sense									KPC-3	KPC-3	KPC-3	KPC-3			
Anti-Sense										KPC-3	KPC-3					
Result	Variant Identified	Sense+Anti-Sense								KPC-3	KPC-3	KPC-3	KPC-3	←---		
CV (if SD > 30% of PM)				Sense	814			72.26								
				716												
				308												
				147		32.09		128.91								
				Anti-Sense	814			60.30	141.79	44.11						
				716	31.77		75.41	105.42	48.79							
				308			47.89									
				147	48.71			68.60								

Klebsiella pneumoniae, KPC-3	Norgen 1	MM/PM	Sense	814	0.254	0.607	0.593	0.538	0.250	0.339	0.393	0.281	0.381	0.396	0.733	
			716	0.607	0.799	0.954	0.228	0.596	0.400	0.349	0.192	0.256	0.150	0.222		
			308	0.258	0.373	0.645	0.818	0.286	0.153	0.069	0.047	0.053	0.043	0.046		
		147	0.415	0.354	0.423	0.620	0.178	0.061	0.072	0.022	0.022	0.017	0.025			
		Anti-Sense	814	0.558	0.726	0.606	0.752	0.400	0.194	0.211	0.116	0.122	0.127	0.221		
		716	0.826	0.961	0.778	0.783	0.932	0.805	0.492	0.128	0.101	0.363	0.721			
	308	0.058	0.090	0.133	0.438	0.054	0.030	0.050	0.017	0.022	0.022	0.041				
	147	0.422	0.423	0.627	0.991	0.207	0.145	0.162	0.106	0.239	0.216	0.254				
	average absolute PM signal intensity	Sense	814	463	127	100	129	589	1690	2352	5395	11487	16490	7092	535.6	
	716	65	35	32	200	77	232	689	976	2833	3940	3096	76.4			
	308	95	60	55	64	136	392	1605	4266	4238	4846	3385	118.4			
	147	109	123	160	127	323	1248	1426	2924	2506	1577	2041	114.9			
Anti-Sense	814	44	35	59	69	72	259	646	2394	2129	545	483	61.8			
716	22	18	27	39	29	37	82	123	340	78	65	30.1				
308	682	362	307	133	919	2719	2379	5509	12417	5501	3262	891.9				
147	111	94	96	94	385	1438	5414	10892	25334	20637	24427	154.7				
Variant Identified	Sense						KPC-3	KPC-3	KPC-3	KPC-3	KPC-3	KPC-3				
Anti-Sense							KPC-3	KPC-3	KPC-3	KPC-3	KPC-3					
Result	Variant Identified	Sense+Anti-Sense					KPC-3	KPC-3	KPC-3	KPC-3	KPC-3	KPC-3	←---			
CV (if SD > 30% of PM)				Sense	814									44.44		
				716				92.67								
				308												
				147												
				Anti-Sense	814			56.12						55.53		
				716												
				308												
				147												

Klebsiella pneumoniae, KPC-3	Norgen 2	MM/PM	Sense	814	0.431	0.892	0.712	0.545	0.407	0.400	0.394	0.358	0.408	0.390	0.412	
			716	0.789	0.746	0.920	0.877	0.794	0.458	0.372	0.353	0.315	0.389	0.339		
			308	0.930	0.996	0.891	0.585	0.359	0.103	0.086	0.065	0.060	0.063	0.074		
		147	0.491	0.548	0.489	0.304	0.152	0.052	0.071	0.030	0.036	0.070	0.110			
		Anti-Sense	814	0.551	0.699	0.887	0.545	0.379	0.190	0.156	0.160	0.144	0.238	0.287		
		716	0.984	0.914	0.940	0.968	0.934	0.834	0.428	0.367	0.426	0.655	0.865			
	308	0.708	0.902	0.757	0.325	0.104	0.035	0.034	0.037	0.036	0.040	0.034				
	147	0.752	0.823	0.995	0.647	0.354	0.118	0.136	0.138	0.179	0.178	0.175				
	average absolute PM signal intensity	Sense	814	24	36	43	48	148	1243	4826	4044	7456	14859	7207	27.2	
	716	21	31	52	22	36	168	755	921	1236	2561	1148	37.7			
	308	18	15	40	31	65	349	1292	2543	1155	603	708	23.6			
	147	38	34	37	99	229	864	1730	1862	1102	672	500	54.5			
Anti-Sense	814	24	1													

Figure S5: Identification of variant KPC-3 (in *K. pneumoniae*) from spiked urine samples. Overview on array data obtained after DNA extraction from spiked urine samples (10 dilution steps + no template control (NTC)) followed by hybridization. Listed are the average absolute perfect match (PM) signal intensities for every SNP position of sense and anti-sense probes. In addition the corresponding MM_{\max}/PM ratios are presented for every SNP position. Once the threshold is reached ($MM_{\max}/PM > 0.7$) the probes are not used for discrimination anymore (marked in dark grey. The same applies for the average absolute PM signal. Once the signal intensity is below the LOD, the probe set is not used for discrimination anymore, also shown in dark grey. Furthermore the standard deviation (SD) is monitored and a probe set is flagged once the SD is larger than 30% of the PM signal, shown in light grey. The probe sets which fulfil all criteria are then used for discrimination and the identified variant is shown at the bottom of the table . This is shown for extractions carried out with Qiagen and Norgen in duplicates. In all cases variant KPC-2 was correctly identified to a concentration of 4000 cells / ml urine (Qiagen) and 80 cells / ml urine (Norgen). A summary of the final results is shown in Figure 4.