1	Supplementary material
2	Fig. S1: Description of novel ISs found in A. baumannii Ab825. The transposase gene is
3	shown in bold and cargo genes in italics. Inverted repeats IRL and IRR are highlighted in yellow
4	and blue, respectively.
5	<i>&gt;ISAba</i> 42; 1,320 bp long
6	GAGACTGTAAATTAAATTGTGTAATTGCCTGAATTTGCTATGTTCATATT
7	GTCAGGCAACATGATGAACGAACAAAAACTAAAAGACCTTGCAGCAGAATTTGC
8	ТАААGGAATCAAAACAGAAGACGATCTCAATCAATTCACCCGATTGTTGACTAA
9	ACTCACTGTTGAAACGGCTCTCAATGCCGAACTTACCGAACATCTCGGACATGA
10	AAAGAATGCTCGTAAGAACGGTTCAAATGCTCGTAACGGTTATTCCAGTAAGAC
11	CGTGCTGAGCGATGATGGTGAGATTGAGATCACCACCACGAGATCGTGATG
12	GCACATTTGAGCCACAGCTAATTAAAAAGAATCAGACTCGTATCACGCAAATGG
13	ATAACCAAATTCTATCCCTTTATGCCAAAGGCATGACTACCCGTGAAATCGTGG
14	CTACTTTCAAAGAAATGTACGATGCTGATGTATCGCCAACGCTTATTTCCAAGG
15	TGACTGATGCTGTTAAGGAGCAAGTCGCTGAATGGCAAAACCGTCCGCTGGAT
16	GCACTCTATCCCATCGTCTATATGGACTGTATTGTAGTTAAAGTCCGTCATAATG
17	GCAGTGTTATCAACAAGGCTGTATTCCTTGCCTTAGGCATTAATCTTGATGGAC
18	AGAAAGAACTGCTCGGCATGTGGATGGCTGAGAATGAAGGTGCAAAGTTCTGG
19	CTGAATGTCCTGACTGAGCTTAAAAACCGAGGGTTGCAGGATATTCTGATCGCC
20	TGTGTGGATGGACTAAAAGGCTTTCCTGATGCCATTAACAGCGTATACCCGCAA
21	ACCCATATCCAGCTGTGCATTATCCATATGCTGCGTAACAGCTTGAAATACGTAT
22	CATGGAAAGATTACAAGGCCGTCACTCAGGATTTAAAAAACCGTTTATCAGTCAC
23	CTACTGAAGAGGCAGCCTTGATGGCCTTGGATCAATTCGCCCAAACATGGGAT
24	GACAAGTACCCACAGATCAGCAAAAGCTGGCGTACACACTGGGAGAATCTAAA
25	TACCTTCTTTGCTTATCCAGCCGAGATACGCAAAGCCATCTATACCACCAATGCG
26	ATCGAATCATTAAACAGCGTAATACGTCAGGCGATCAAAAAGCGTAAAGTCTTT
27	CCAACGGATGATTCTGTACGTAAAGTGATTTACCTGGCAATTGATGCAGCGTCT

28	AAAAAGTGGAATATGCCTATTCGCGACTGGCGTTTAGCCATGAGCCGCTTTATT
29	ATTGAATTCGGTGACCGCTTA <mark>AGCAATCACCTTTAA</mark> ATTTATGAAAAGCAATTACA
30	CAAAATTATTTACAG <u>GCT</u> C
31	
32	IR-L:GAGACTGTAAATTAAATTGTGTAATTGCCTGAATTTGCTATGTTCATATT
33	IR-R:GAGCCTGTAAATAATTTTGTGTAATTGCTTTTCATAAATTTAAAGGTGAT
34	
35	DR length: 8 bp
36	
37	
38	>TnpA (coord: 70-1281, 403 aa)
39	MMNEQKLKDLAAEFAKGIKTEDDLNQFTRLLTKLTVETALNAELTEHLGHEKNARKNG
40	SNARNGYSSKTVLSDDGEIEITTPRDRDGTFEPQLIKKNQTRITQMDNQILSLYAKGMTT
41	REIVATFKEMYDADVSPTLISKVTDAVKEQVAEWQNRPLDALYPIVYMDCIVVKVRHN
42	GSVINKAVFLALGINLDGQKELLGMWMAENEGAKFWLNVLTELKNRGLQDILIACVDG
43	LKGFPDAINSVYPQTHIQLCIIHMLRNSLKYVSWKDYKAVTQDLKTVYQSPTEEAALM
44	ALDQFAQTWDDKYPQISKSWRTHWENLNTFFAYPAEIRKAIYTTNAIESLNSVIRQAIKK
45	RKVFPTDDSVRKVIYLAIDAASKKWNMPIRDWRLAMSRFIIEFGDRLSNHL
46	
47	
48	> <i>ISAba</i> 43; 2,655 bp long
49	GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAACCC
50	GCACATGAGCGCTACCAAGAAAGCAGACAAGTAAGCCGCAGCAACCTTCGTTTTCG
51	GTTGTTGCGGCGTTCTCAAGAACCTAGTTGCTCTGCAAGAGCGCCGCCAAATTCTTA
52	ACTTAAGGAGATGGCTTCGTGCGCTCAAAAGATTTTTCTTGGCGGTATTCTCTTCCCGCC
53	ACGCTATTGCTGTTATCACCATTCGATTTGCTGGCGTCACTGGGCATGGATATGTACCTGC
54	CCGTGGTGCCTTTCATGGCGGATGCACTTGGGTCCGGTGCAGGGACGATCCAGCTGACG

55 TTGACGGCATACCTGGTTTTGCTTGGAGCCGGACAGCTTCTCTCGGCCCACTGTCGGAT CGGCTGGGTCGCCGCCCGTTTTACTTGGTGGCGGGATTGCCTATATTGCGGCTTCATTC 56 57 *GGCCTCACCGTAGTTTCATCGCCAGAACTTTTTCTGAGCTTCCGCGTTCTTCAGGCCTGC* 58 GGCGCTTCGGCATGTCTCGTTTCCACTTTCGCGACGGTACGCGACATCTATTCGGGCCGT GAGGAAAGCAACGTCATCTATGGCTTGCTCGGCTCTATGCTTGCGATGGTTCCTGCGATA 59 *GGCCCACTGCTAGGAGCGCTGGTCGACGCGTGGCTCGGATGGCGCGCAATCTTCGGCT* 60 61 TGCTAGGGATGGCAATGATAGGCGCTGTTATCGCAGCCTGGCGACTCTGGCCAGAGACTC 62 GGCGGCACCGGACGGCAGACCTACAGTGGTCGCAGCTATTGACTCCTGTGAAACACCTG 63 AACTTCTGGCTGTACACGCTCTGTTACAGCGCGGGGGATGGGCAGCTTTTTCGTCTTTTCT CGACCGCCCCTGGCTAATGATGGGGGGGGGGGGGGGGTTATCGCAACTTAGCTTCAGCTTGC 64 65 TATTTGCTACAGTGGCCATCGCTATGATGGCTACAGCGCGAATCATGGGACGACTGATTCC 66 CCGGTGGGGAAGCCTGAAGACCTTACGAGTGGGAATGGGGTGTCTGATGGCGGGAGCG CTGTTGCTCGCTGTTGGCGAGACATTGGCACCGGTCTCGGTGCTTGGCTTCATCGCCCC 67 GATGTGGCTCGTGGGTGTTGGTATCGCCACTGCGGTATCGGTGGCACCCAATGCCGCTC 68 69 TTCGAGGTTTCGATCATATCGCTGGGACCGCTACAGCAGTCTACTTCTGTTTGGGTGGACT70 ACTGTTAGGGATTATCGGGACACTCATTATTACGCTTTTATCGACTGGTACCACCTGGCCGA 71 72 CAGACGCCATCTCAGCCAAGAAGAACATGATGCCTTGGCGCTACAAGGCACCGATAGCGC 73 GCAATCGGTCCATGATCATGACTAGCGCTGATGTTTGGAGCCTGTTCTGGAAGGGC 74 TTTTCGCCAGCGTCTCATGGGCTTCTAGATGAACAGACTTTGCTGATCCGTCTT 75 ACACGACGACGAGGAGCATACGCCAATTTGTAGCCGATGCGATTGCCCTTGTTTC 76 CTGGTACATGACATCAATTGGCGCCGAGTTCGCGAGTCACCAATTATGCAGTAT CGCGTCGAGTTGGATGTACCTGTGCGGCGGCGGCTGCGTTGTCCACAATGCGGTCC 77 78 AACCAGAGAGCGGATCGATTGGCTACCACCGCGCTCCCGTATTACGCAATCATT 79 80 TCTTTTGGGCTTGCATTGGCATACAGTCAAGACTATTGACATGGAGCGGCTCAA 81 ACGTGATTTGCACGAGCCAGATCGAAGTCGATTGCGCCGCCTGATGATGGACG

82	AATTCGCCTTGCACAAGGGTCATCGCTACGCCACGGTGGTCGCCTGTGCCGAC
83	ACCCAGCAAGTGGTGTGGGATTGGCGAGGGCCGCTCGCGTGAGGCGATCCGGC
84	CGTTCTTCGAGTGGTTAGGCGATGCCCGGAACCAGATCGAGGCAGTGGCCATG
85	GACATGAACTCAGCCTTCGATCTTGAAGTGAAGGCCCAGTGCCCCAACGCGGT
86	GGTGGTCTACGACCTGTTCCATGTGGTGGCTAAGTATGGCCGCGAAGTGATGG
87	ATAGAGTGCGAGTTGATCAGGCCAATCAACTGCGAGATGACAAGGTCGCCCGC
88	AAGGTGATCAAAAGCAGCCGTTGGATACTGTTACGCAATGCTGACAACCTTGA
89	GCCCGAGCAGGCGGTCAAGCTGGACGAACTCCTGGCCGCCAATGCGTTCTTGA
90	CTACGGTGTACGTGCTCAAGGACCAACTTAAGACGCTATGGTTTGCGGAAAGC
91	GAGACGACGGCCAGAAGCGCCTGGCGGGAATGGGCCGGCATGGCCCTCGGTA
92	GCGGAATTGATGCTTTGGTACGATTTGCCAAGAAGCTGGAGCCATATATGGAGG
93	GTATCGTTTCCAGTGCCCTCCACCGGCTGAACACCAGCGTGCTGGAGGGCATG
94	AACAACCGGATCAAAGTCATTAAGCGGATGGCCTATGGA <mark>TACCGCGACACGGA</mark>
95	CTACTTCTTCCTCAAGATCCGTGCTGCATTTCCCCGGCAAAGTGCGATGAAC
96	
96 97	
96 97 98	
96 97 98 99	IRL: GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA
96 97 98 99 100	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA CCCGCACATG
96 97 98 99 100 101	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA CCCGCACATG IRR:GTTCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG
96 97 98 99 100 101	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA   CCCGCACATG   IRR:GTTCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG   TCGCGGTA
96 97 98 99 100 101 102 103	IRL: <mark>GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA</mark> CCCGGCACATG IRR:GT <i>TCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG</i> <i>TCGCGGT</i> A
96 97 98 99 100 101 102 103 104	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA   CCCGCACATG   IRR:GTTCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG   TCGCGGTA   DR length: 8/10 bp
96 97 98 99 100 101 102 103 104 105	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA   CCCGCACATG   IRR:GTTCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG   TCGCGGTA   DR length: 8/10 bp
96 97 98 99 100 101 102 103 104 105 106	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA         CCCGCACATG         IRR:GTTCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG         TCGCGGTA         DR length: 8/10 bp         >ORF1 Chloramphenicol resistance protein drug resistance transporter, Bcr/CflA subfamily
96 97 98 99 100 101 102 103 104 105 106 107	IRL:GTTCTTTGCACTTTAGCGTGAAGATTGTTACGATATGGACTCATCCATGAGATAA   CCCGCACATG   IRR:GTTCATCGCACTTTGCCGGGAAATGCAGCACGGATCTTGAGGAAGAAGTAGTCCGTG   TCGCGGTA   DR length: 8/10 bp   >ORF1 Chloramphenicol resistance protein drug resistance transporter, Bcr/CflA subfamily   [Acinetobacter baumannii Ab825sp] (coord: 190-1455; 1266 bp; 421 aa )

109 VLLGAGQLLFGPLSDRLGRRPVLLGGGIAYIAASFGLTVVSSPELFLSFRVLQACGASAC
110 LVSTFATVRDIYSGREESNVIYGLLGSMLAMVPAIGPLLGALVDAWLGWRAIFGLLGMA
111 MIGAVIAAWRLWPETRRHRTADLQWSQLLTPVKHLNFWLYTLCYSAGMGSFFVFFSTAP
112 WLMMGRQGLSQLSFSLLFATVAIAMMATARIMGRLIPRWGSLKTLRVGMGCLMAGALL
113 LAVGETLAPVSVLGFIAPMWLVGVGIATAVSVAPNAALRGFDHIAGTATAVYFCLGGLLL
114 GIIGTLIITLLSTGTTWPIIAYCLILATAVLCLSCINPNRRHLSQEEHDALALQGTDSAQSVH
115 DHD

- 116
- 117 >ORF2 Transposase DDE Domain [Acinetobacter baumannii Ab825sp] (coord: 1448-2653;
  118 1206 bp; 401 aa)
- 119 MTSADVWSLFWKGFSPASHGLLDEQTLLIRLTHDEEHTPICSRCDCPCFLVHDINWRRV
- 120 RESPIMQYRVELDVPVRRLRCPQCGPTRERIDWLPPRSRITQSLRNWIEKLVQMLPVSHV
- 121 ANLLGLHWHTVKTIDMERLKRDLHEPDRSRLRRLMMDEFALHKGHRYATVVACADTQ
- $122 \qquad {\sf QVVWIGEGRSREAIRPFFewlgdarnQieavamdMnsafdlevkaQcPnavvvydlfh}$
- 123 VVAKYGREVMDRVRVDQANQLRDDKVARKVIKSSRWILLRNADNLEPEQAVKLDELL
- 124 AANAFLTTVYVLKDQLKTLWFAESETTARSAWREWAGMALGSGIDALVRFAKKLEPY
- 125 MEGIVSSALHRLNTSVLEGMNNRIKVIKRMAYGYRDTDYFFLKIRAAFPGKVR



Figure S2. Organization and gene content of plasmid pAb244\_7. Inferred scheme of pAb244\_7 plasmid (MG520098). The ORFs and their corresponding orientations are denoted by arrows. Closed arrows correspond to genes with described functions, whereas open arrows relate to unknown functions in databases. A dark circle denotes the predicted *oriV* region, whose starting bases were arbitrarily set to 1 in the clockwise scale (innermost circle) that also indicates the corresponding kbp. XerC/D-like binding sites are shown as dark/gray ovals.





143 Figure S3. Schematic representation of pAb244\_7 sequence inferred by comparative 144 sequence analysis and gap closure strategy. A. The circular form of pAb244\_7 (gray inner 145 circle) was confirmed by gap closure of the contigs assembled from the pyrosequencing data. 146 The primer pair A (67b-fw and 89-R) used for this purpose is described in Supplementary Table 147 S1. The sequence of the corresponding amplicon was verified by sequencing analysis. Regions 148 of homology between pAb244\_7 and pAb242\_9 from Ab242 [1] are indicated by the outer

circle in orange. Relevant XerC/D (C/D) sites identified in these plasmids are indicated as
circles (not drawn to scale), with the XerC (C) and XerD (D) recognition motifs depicted as
dark gray and light gray semi-circles, respectively. The *orf8*, *orf12* genes and the XerC/D
recognition site #14 (C14/D14) are shown. **B.** Representation of the pAb242\_9 plasmid
containing a 1.3 kbp region (depicted in yellow) flanked by XerC/D sites, which are absent from
pAb244\_7.



#### 156

Figure S4. Genetic organization of K loci in strains under study. A novel K-locus with a similar gene composition to the PSgc12 [2] was identified. This locus is identical between strains Ab242 and Ab244, whereas in strain Ab825, the presence of two additional ORFs predicted to code for glycosyl-transferase proteins was observed. It contains a gene cluster (*psaA-psaF*) predicted to direct the synthesis of a pseudaminic acid derivative. Notably, the *gne* gene, which codes for a UDP-NAc-glucose-4-epimerase, is followed by an ISAba26 in all strains. Moreover, the *cgmA* gene is interrupted by an ISAba31 (see text for details). The gray-shaded background interconnecting the different structures highlights the homologous regions (nucleotide sequences  $\geq$  90% identity). Genes are coloured according to the 162 code shown in the figure. The genes are not drawn to scale.

- 164 List of Supplementary Tables
- 165 Table S1: Oligonucleotide primers used for PCR analysis and primer walking
- 166 **Table S2: MLST classification data.**
- 167 Table S3: Prophages carried by A. baumannii
- 168 Table S4: IS-related genes in A. baumannii strains under study.
- 169 Table S5: Antimicrobial susceptibility profiles of A. baumannii Ab242, Ab244 and Ab825 as
- 170 **determined with VITEK-**2
- 171 Table S6: Genes putatively contributing to resistance to antimicrobials in A. baumannii
- 172 strains under study.
- 173 Table S7: Putative virulence factors present in *A. baumannii* strains under study.
- 174 Table S8: Location of insertion sequences found in *A. baumannii* Ab242, Ab244 and Ab825
- 175 chromosomes.
- 176

### 177 **Table S1. Oligonucleotide primers used for PCR analysis**

Primer pairs		DNA molecule Annealing region coordinates		Sequence (5'→3')	Expected product size (bp)	Application	Reference or source
A	67b- Fw	pAb244_7	4,412-4,442	AGCGTAAAAGACCA GTTTGGCGTTAAAC ACG	2,616	Plasmid gap- closure	This work
	89-R	pAb244_7	1,827-1,854	GTATCCCTGTTCCA GAACACGTTGAGCC		(see Fig. S2)	
	usp-fw	Ab242/abr	504-522 (contig 86)	ACCGAGCATGATTC CAGTA		Confirmation	This work
В	orf-rv	Ab242/chr omosome	38,463- 38,479 (contig 87)	GGTGTCCGAGCATA AGC	1,600	insertion into Tn6022	This work

## 179 Table S5. Antimicrobial susceptibility profiles of *A. baumannii* Ab242, Ab244 and Ab825 as

180 determined by VITEK-2

181

100			MIC (µg/ml) <sup>a</sup>	
182	Antimicrobial	Ab242	Ab244	Ab825
102	Ampicillin	≥32 (R)	≥32 (R)	≥32 (R)
185	Ampicillin/Sulbactam	MIC (µg/ml) <sup>a</sup> al         Ab242         Ab244         Ab825 $\geq 32$ (R) $\geq 32$ (R) $\geq 32$ (R)           lbactam         16 (R) $\geq 32$ (R)         16 (R)           azobactam $\geq 128$ (R) $\geq 128$ (R) $\geq 128$ (R) $\geq 64$ (R) $16$ (I) $\geq 64$ (R) $\geq 64$ (R) $16$ (I) $\geq 264$ (R) $\geq 64$ (R) $16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 232$ (R) $\geq 322$ (R) $\geq 322$ (R) $\geq 24$ (R) $\geq 4$ (R) $\geq 4$ (R) $\geq 264$ (R) $16$ (R) $\geq 20$ (S)		
194	Piperacillin/Tazobactam	≥128 (R)	≥128 (R)	≥128 (R)
104	Cefotaxime	≥64 (R)	≥64 (R)	≥64 (R)
185	Ceftazidime	16 (I)	≥64 (R)	≥64 (R)
105	Cefepime	16 (I)	32 (R)	32 (R)
186	Imipenem	≥16 (R)	$\leq$ 0.5 (S)	≥16 (R)
100	Meropenem	≥16 (R)	$\leq$ 0.5 (S)	≥16 (R)
187	Nalidixic acid	≥32 (R)	≥32 (R)	≥32 (R)
	Ciprofloxacin	$\geq 128$ (R) $\geq 128$ (R) $\geq 128$ (R) $\geq 128$ (R) $\geq 64$ (R) $\geq 64$ (R) $\geq 64$ (R) $\geq 64$ (R)           16 (I) $\geq 64$ (R) $\geq 64$ (R) $\geq 64$ (R)           16 (I) $\geq 202$ (R) $\equiv 202$ (R) $\geq 216$ (R) $\geq 16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 16$ (R) $\leq 0.5$ (S) $\geq 16$ (R) $\geq 232$ (R) $\geq 322$ (R) $\geq 322$ (R) $\geq 44$ (R) $\geq 44$ (R) $\geq 44$ (R) $\geq 64$ (R) $166$ (R) $\geq 644$ (R)		
188	Amikacin	≥64 (R)	16 (R)	≥64 (R)
	Sulfamethoxazole/	≥320 (R)	≥320 (R)	≥20 (S)
189	Trimetoprim			
	(23.75/1.25)			
190	Tetracycline <sup>b</sup>	2	4	64 (R)

191 "The antimicrobial susceptibility profiles of the strains was evaluated using
192 the VITEK-2 System (bioMérieux) following the criteria recommended by
193 CLSI standards. Interpretation: S: susceptible; R: resistant; I: intermediate.

<sup>b</sup>Determined by the macrodilution method using MH broth in accordance to
 CLSI recommended procedures

				A	b242				
IS	IS locus tag	IS location	Locus tag(s) of the disrupted gene <sup>b</sup>	Putative function of the disrupted gene	Locus tag(s) of IS flanking genes	Putative function of IS flanking genes	Metabolic pathway/Virule nce Factor	Number of genomes with same IS location <sup>c</sup>	Ref. genome locus Tag <sup>d</sup>
ISAba42	CJU83_05025	In	CJU83_05020 (N)	Type I secretion system-dependent protein	-	-	Ca2+-binding protein, RTX toxin-related	N/R	
ISAba43	CJU83_05970- CJU83_05975	In	CJU83_05965 (N)	PhzF-like	-	-	Phenazine biosynthesis	N/R	
ISAba31	CJU83_07630	In	CJU83_07625 (N)- CJU83_07635 (C)	Hypothetical	-	-	Ph242-B	N/R	
ISAba125	Not annotated	In	-	-	CJU83_17340/C UJ17770	UspA/Hypothetical protein	AbaR-like	N/R	
ISAba26	CJU83_18565	IR	-	-	CJU83_18560/ CJU83_18570	Gne/CgmA	K locus for capsule biosynthesis	N/R	
ISAba31	Not annotated	In	CJU83_18570	Lipoteichoic acid synthase (LTA) like domain protein CgmA	-	-	K locus for capsule biosynthesis	N/R	
				Α	b244		·		
IS	IS locus tag	IS location	Locus tag(s) of disrupted gene <sup>a</sup>	Putative function of disrupted gene	Locus tag(s) of IS flanking genes	Putative function of IS flanking genes	Metabolic pathway/Virule nce Factor	Number of genomes with same IS location <sup>b</sup>	Ref. genome locus Tag <sup>c</sup>
ISAba1	CVG52_05305	IR	-	-	CVG52_05300/ CVG52_05310	<i>bla</i> ADC- beta- lactamase	Resitance to beta-lactamics	736	M3Q_2831/ M3Q_2828
ISAba42	CVG52_05065	In	CVG52_05060 (N)	Type I secretion system-dependent protein	-	-	Ca2+-binding protein, RTX toxin-related	N/R	

# 197 Table S8. Location of insertion sequences found in *A. baumannii* Ab242, Ab244 and Ab825 chromosomes<sup>a</sup>.

ISAba31	CVG52_07330	In	CVG52_07325 (N) CVG52_07335 (C)	Hypothetical protein	-	-	Ph244-B	N/R	
ISAba125	CVG52_11015	In	CVG52_11010 (pseudogene)	CinA	-	-	Competence	30	M3Q_1781
ISAba26	CVG52_18150	IR	-	-	CJU83_18145/ CJU83_18155	CgmA/Gne	K locus for capsule biosynthesis	N/R	
ISAba31	Not annotated	In	CVG52_18145	Lipoteichoic acid synthase (LTA)-like domain protein CgmA	-	-	K locus for capsule biosynthesis	N/R	
				Al	b825				
IS	IS locus tag	IS location	Locus tag(s) of disrupted gene <sup>a</sup>	Putative function of disrupted gene	Locus tag(s) of IS flanking genes	Putative function of IS flanking genes	Metabolic pathway/Virule nce Factor	Number of genomes with same IS location <sup>b</sup>	Ref. genome locus Tag <sup>c</sup>
ISAba125	CLM70_00285	In	CLM70_00280 CLM70_00290	Sodium dependent transporter	-	-	-	N/R	
IS10R	CLM70_00700  CLM70_00705	IR	-	-	CLM70_00695/ CLM70_00710	Acetamidase- Formamidase/ABC transporter substrate-binding protein	Variety of functions/Transp ort	N/R	
ISAba31	Not annotated	In	CLM70_02585 (pseudogene)	Di-guanylate cyclase (GGDEF domain)	-	-	Biofilm regulation	23	M3Q_798
ISAba1	CLM70_02870	In	CLM70_02875 (pseudogene)	Sensor histidine kinase	-	-	Transcriptional regulation	31	M3Q_3394
IS10R	Not annotated	IR	-	-	CLM70_03360/ CLM70_03605	Putative esterase or lipase (alpha/beta hydrolase fold)/DapE N- succinyl-L,L- diaminopimelate desuccinylase.	DAP	N/R	

IS10R	Not annotated	IR	CLM70_04515/ CLM70_04900	Diacylglycerolkinase/ metallohydrolase	-	-	Phospholipid metabolism/urea cycle and metabolism of amino groups	N/R	
IS10R	Not annotated	IR	-	-	CLM70_04520/ CLM70_04910	Amidohydrolase DapE/ Holliday junction DNA helicase RuvB	DAP	7	M3Q_3063 / M3Q_3064
ISAba825	CLM70_04990	In	CLM70_04985 (pseudogene)	CarO outer membrane protein	-	-	Carbapenem resistance	9	M3Q_3047
ISAba42	Not annotated	In	CLM70_04995 (pseudogene)	Type I secretion system-dependent protein	-	-	Ca2+-binding protein, RTX toxin-related	N/R	
ISAba1	Not annotated	IR	-	-	CLM70_05835/ CLM70_06100	<i>bla</i> ADC- beta- lactamase	Resitance to beta-lactamics	736	M3Q_2831 / M3Q_2828
ISAba43	CLM70_06200/ CLM70_06205	In	CLM70_06195 (pseudogene)	PhzF	-	-	Phenazine biosynthesis	N/R	
ISAba1	Not annotated	IR	-	-	CLM70_06590 CLM70_06595	Transcriptional regulator, TetR family/Sigma- fimbriae uncharacterized paralogous subunit	Transcriptional regulation/Type I-Pili component CsuAB	184	M3Q_2687/ M3Q_2688
ISAba125	Not annotated	In	CLM70_06600 (pseudogene) CLM70_06605 (pseudogene)	CsuA	-	-	Type I-Pili component	36	M3Q_2685
IS10R	Not annotated	In	CLM70_06820 (N) CLM70_06810 (C)	Alanine racemase	-	-	Cell wall synthesis	N/R	
ISAba125	Not annotated	In	CLM70_06890 (pseudogene) CLM70_06895	Biofilm PGA synthesis deacetylase PgaB	-	-	EPS synthesis	4	M3Q_2611

ISAba42	Not annotated	IR	-	-	CLM70_07550 CLM70_07820	Phage integrase/Transcripti onal regulator	-	N/R	
ISAba31	Not annotated	In	CLM70_07890(N) (pseudogene) CLM70_07915(C)	Hypothetical/Hypotheti cal	-	-	Ph825-B	N/R	
ISAba43	Not annotated	IR	-	-	CLM70_07925 CLM70_08175	Transcriptional regulator, TetR family/Nitrogen regulation protein NtrC	Transcriptional regulation/Gln Synthetase regulation	9	M3Q_2447 /M3Q_2448
ISAba125	Not annotated	IR	-	-	CLM70_08875 (pseudogene) CLM70_09040	Hypothetical/Hypot hetical	-	N/R	
ISAba43	CLM70_09440	In	CLM70_09435 (pseudogene) CLM70_09445	Phospholipase D	-	-	Host colonization	2	M3Q_3378
ISAba125	Not annotated	In	CLM70_09885 (pseudogene) CLM70_09890 (pseudogene)	Ribonuclease D	-	-	-	17	M3Q_2071
ISAba125	Not annotated	In	CLM70_09930 (N)	Hypothetical	-	-	-	N/R	
ISAba125	Not annotated	In	CLM70_11630 (pseudogene)	CinA	-	-	Competence	30	M3Q_1781
ISAba43	CLM70_11635	In	CLM70_11640 (pseudogene; C) CLM70_11915 (N)	Cytosine, purine, uracil, thiamine, allantoin permease family protein	-	-	-	9	M3Q_1895
ISAba125	Not annotated	In	CLM70_12310 CLM70_12315	T6SS component AsaA	-	-	Type 6 secretion system	N/R	
ISAba125	Not annotated	IR	-	-	CLM70_12475 CLM70_12590	Rhs-family protein/Hypothetical	Toxin/ Hypothetical	N/R	

ISAba43	Not annotated	IR	-	-	CLM70_12480 CLM70_12595	Diguanylate cyclase- phosphodiesterase /EamA family transporter (threonine)	Biofilm regulation	6	M3Q_1620/ M3Q_1621
ISAba42	Not annotated	In	CLM70_13785(N)	Hypothetical	-	-	-	N/R	
ISAba125	Not annotated	IR	-	-	CLM70_14685 (pseudogene) CLM70_14690	SAM-dependent methyl transferase/Hypothet ical	-	N/R	
ISAba125	Not annotated	In	CLM70_15390(N)	Hypothetical	-	-	-	N/R	
IS10L	Not annotated	IR	-	-	CLM70_15930 CLM70_16745	Hypothetical/DNA topoisomerase I	-	N/R	
IS10R	CLM70_17485 CLM70_17490	IR	-	-	CLM70_17480/ CLM70_17495	Predicted esterase of the alpha-beta hydrolase fold/TetC	-	N/R	
IS10L	Not annotated	IR	-	-	CLM70_17530 (pseudogene)/ CLM70_17535	LysR family transcriptional regulator/MerR family transcriptional regulator	-	N/R	
IS10R	Not annotated	In	CLM70_17780(N) (pseudogene) CLM70_17955(C)	Hypothetical	-	-	-	N/R	
ISAba43	Not annotated	In	CLM70_18160(N) (pseudogene) CLM70_18175 (C)	Hypothetical protein (DUF2236)	-	-	-	N/R	
ISAba31	CLM70_18695	In	CLM70_18700 (N) CLM70_18690 (C)	Lipoteichoic acid synthase (LTA) like domain protein CgmA	-	-	K locus for capsule biosynthesis	N/R	
ISAba26	CLM70_18705	IR	-	-	CLM70_18700/ CLM70_18710	CgmA/Gne	K locus for capsule biosynthesis	N/R	

- <sup>a</sup> Only most relevant IS elements were considered in this Table.
- <sup>b</sup> N and C refer to the N- and C-terminal segments of encoded proteins.
- <sup>c</sup> According to Adams, et al. 2016 <sup>d</sup> Acinetobacter baumannii TYTH-1
- In: interrupted gene; IR: intergenic region; N/R: not reported

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