Figure S1. Intact Prophage founded in *B. velezensis* KS04AU. PHAGE_Aeriba_AP45_NC_048651 (region 2) and PHAGE_Paenib_Tripp_NC_02893 (region 4).

Table S1. Comparative analysis of functional subsystem category in genomes of *B. velezensis* SCRM102752 KS04AU, FZB42, ONU553, and *B. amyloliquefaciens* LL3 and IT-45 based on SEED servers.

` Subsystem Features	KS04AU	ONU-553	SRCM102752	IT-45	JS25R	FZB42	LL3
Cofactors, Vitamins, Prosthetic Groups, Pigments	150	147	147	147	148	147	145
Cell Wall and Capsule	81	77	77	78	76	73	89
Virulence, Disease and Defense	36	36	39	39	37	38	37
Potassium metabolism	3	3	3	3	3	3	3
Miscellaneous	24	24	24	24	24	24	23
Phages, Prophages, Transposable elements, Plasmids	14	8	8	14	4	0	14
Membrane Transport	41	41	41	41	41	42	41
Iron acquisition and metabolism	23	23	26	23	24	25	27
RNA Metabolism	56	56	64	67	66	64	63
Nucleosides and Nucleotides	99	94	93	94	95	95	106
Protein Metabolism	183	209	211	213	200	211	202
Cell Division and Cell Cycle	6	6	6	6	6	6	6
Motility and Chemotaxis	44	43	42	42	43	42	43
Regulation and Cell signaling	27	27	26	26	27	28	27
Secondary Metabolism	6	6	7	7	6	6	6
DNA Metabolism	62	59	62	59	64	63	65
Fatty Acids, Lipids, and Isoprenoids	56	54	53	54	54	53	50
Nitrogen Metabolism	20	20	20	19	21	20	19
Dormancy and Sporulation	92	92	91	92	91	91	97
Respiration	40	40	40	41	40	40	41
Stress Response	44	44	43	45	43	43	45
Metabolism of Aromatic Compounds	12	12	12	12	12	13	12
Amino Acids and Derivatives	302	302	305	293	302	301	300
Sulfur Metabolism	6	6	6	6	7	6	6
Phosphorus Metabolism	12	11	18	16	12	12	11

Table S2. Analysis of mobile genetic elements (IS-Elements) of genome *Bacillus velezensis* KS04AU, JS25R, FZB42, ONU-553, and SRCM102752.

№	KS04AU	JS25R	FZB42	ONU 553	SRCM102752
1	ISBsu1	ISBsu1	ISBsu1	ISBsu1	ISBsu1
2	ISErh1	ISPana1	ISBce5	ISErh1	ISBce5
3	ISCco2	ISBsu3	ISBce7	ISCco2	ISBce7
4	ISBt2	ISCco2	ISBth4	ISBt2	IS231Y
5	ISTli1	ISAur1	IS231Y	ISTli1	ISBth4
6	ISLmo1	ISTli1	ISBce8	ISLmo1	ISBce8
7	ISSau4	ISCot1	ISErh1	ISSau4	ISErh1
8	ISCot1	ISSsu2	MICBce5	ISCot1	MICBce5
9	ISSsu2	ISCldi1	MICBce6	ISSsu2	MICBce6
10	IS1170	ISAba17	ISBsu3	IS1170	ISBt2
11	ISCldi1	ISAusp1	MICBth1	ISCldi1	MICBth1
12	ISAba17	ISPlu5	ISTli1	ISAusp1	ISTli1
13	ISCth5	ISCosp2	ISLmo1	ISAba17	ISLmo1
14	ISAusp1	ISRtr6	ISBce2	ISCth5	ISBce2
15	ISPlu5	ISSag12	ISSau4	ISPlu5	ISSau4
16	ISMetp1	ISPth1	MICBce2	ISCfr8	MICBce2
17	ISCfr8	ISPak1	IS231D	ISPth1	IS231D
18	ISRtr6	ISMlo5	ISPana1	ISMaq6	ISSsu2
19	ISSag12	ISPfr16	ISSsu2	ISKol1	IS1170
20	ISPth1	ISKol1	ISBth19	ISMxa3	ISIse1
21	ISPak1	ISAde3	ISAusp1	ISAau4	ISCldi1
22	ISMaq6	ISCth11	ISBce4	ISAzvi9	ISChh1
23	ISPfr16	ISSsu4	IS231R	ISRru1	ISDpr8
24	ISKol1	ISAau4	ISPa72	IS30H	ISAba17
25	ISDpr6	ISLsp3	ISCfr8	ISRtr6	ISCth5
26	ISDpr5	ISAzvi9	ISDph1	ISSag12	ISOba2
27	ISAde3	ISSav4	ISSag12	ISPak1	ISAusp1
28	ISSsu4	ISMmy2	ISCot1	ISPfr16	ISBce4
29	ISMxa3	ISFal3B	ISPth1	ISDpr6	IS231R
30	ISAau4	ISFal3A	ISShes11	ISDpr5	ISCfr8
31	ISFnu8	IS943	ISPak1	ISAde3	ISRtr6
32	ISIlo12	ISSis2	ISMaq6	ISSsu4	ISAeme4
33	ISAzvi9	ISLhe6	ISPfr16	ISFnu8	ISCysp21
34	ISSav4	IS231T	ISKol1	ISSav4	ISCco2
35	ISMmy2	IS231R	ISOih1	ISRba1	ISSag12
36	ISFal3B	ISRru1	ISAde3	ISMmy2	ISCot1
37	ISFal3A	ISNg1	ISLsp3	ISFal3B	ISGob7
38	IS943	IS30H	ISSso4	ISFal3A	ISPth1
39	ISSis2	IS1170	ISAzvi9	IS943	ISPak1
40	ISAba5		ISSav4	ISSis2	ISMaq6
41	ISLhe6		ISRba1	ISAba5	ISPfr16
42	IS231T		ISFal3B	ISLhe6	ISKol1
43	IS231R		ISFal3A	IS231T	ISOih1
44	ISSf1		IS943	IS231R	ISAde3
45	ISRru1		ISSis2	ISSpo1	ISMxa3
46	IS30H		ISLhe6	ISSf1	ISLsp3
47	IS1182		IS231T	IS1182	ISAzvi9
48			ISSf1		ISSav4
49			ISM1		ISMmy2
50			IS30H		ISFal3B
51			IS1221I		ISFal3A

52			IS1221G		IS943
53			IS1170		ISSis2
54					ISLhe6
55					IS231T
56					ISSf1
57					IS30H
58					IS231W
59					IS231V
60					IS231K

Table S3. Mobile genetic elements (IS-Elements) shared between genomes used in this study.

№	00001	00010	00100	00110	01000	01001	01010	01011	01100	10000	10100	10110	11001	11010	11011	11101	11111
1	ISMetp1	ISAur1	ISBth19	ISPana1	ISSpo1	ISDpr6		ISPlu5	ISRba1	ISIse1	ISBce5	ISLsp3	ISBt2		ISCco2	ISErh1	ISBsu1
2	ISIlo12	ISCosp2	ISPa72	ISBsu3		ISDpr5		ISSsu4		ISChh1	ISBce7		ISCth5		ISCldi1	ISLmo1	ISTli1
3		ISMlo5	ISDph1			ISFnu8		ISAau4		ISDpr8	ISBth4	ISMxa3			ISAba17	ISSau4	ISCot1
4		ISCth11	ISShes11			ISAba5		ISRru1		ISOba2	IS231Y				ISRtr6	ISCfr8	ISSsu2
5		ISNg1	ISSso4			IS1182				ISAeme4	ISBce8				ISMmy2	ISMaq6	IS1170
6			ISM1							ISCysp21	MICBce5					ISSf1	ISAusp1
7			IS1221I							ISGob7	MICBce6						ISSag12
8			IS1221G							IS231W	MICBth1						ISPth1
9										IS231V	ISBce2						ISPak1
10										IS231K	MICBce2						ISPfr16
11											IS231D						ISKol1
12											ISBce4						ISAde3
12											ISOih1						ISAzvi9
14																	ISSav4
15																	ISFal3B
16																	ISFal3A
17																	IS943
18																	ISSis2
19																	ISLhe6
20																	IS231T
21																	IS231R
22																	IS30H