

## Supplementary Information

### Materials and methods

#### Preparation of Proteins

Plasmids for expression of full-length *E. coli* or *H. sapiens* AlaRS were constructed through PCR amplification of the desired region of the AlaRS genes with oligonucleotides containing NdeI-XhoI or NdeI-BamHI sites and ligated into pET20b to generate pET20b-*Ec*AlaRS and pET20b-*Hs*AlaRS.

Plasmids for expression of mutant *E. coli* AlaRS (N303A, N303D, D400A, D400N, N303A/D400A) and *H. sapiens* AlaRS (N317A, N317D, D416A, D416N, N317A/D416A) were constructed by the standard Quikchange mutagenesis of pET20b-*Ec*AlaRS or pET20b-*Hs*AlaRS. These proteins were expressed in *E. coli* BL21 (DE3) cells (Stratagene) and purified by Ni-NTA affinity column (Qiagen) and a Q high performance column (GE Healthcare). All proteins were dialyzed against 5 mM Tris-HCl buffer, pH 8.0, 50 mM NaCl and 2 mM DTT.

#### Preparation of tRNAs

Transfer RNAs were produced by *in vitro* transcription. 10 mL transcription reactions were carried out at 37 °C for 2 hours in buffer (40 mM Tris-HCl, pH 8.0, 25 mM NaCl, 20 mM MgCl<sub>2</sub>, 2 mM 1,8-diaminooctane, 10 mM DTT) with T7 RNA polymerase (40 U/μL), and BstNI-linearized pUC18-tRNA<sup>Ala</sup> plasmid DNA template (1 μM). The transcribed tRNAs were purified by a 8 M urea-denaturing PAGE gel or in combination with a DEAE column, annealed and concentrated. The quantity of tRNA was determined by A260.

### Active Site Titration Assays

Active site titration was performed at 25 °C in assay buffer (50 mM HEPES, pH 7.5, 20 mM KCl, 5 mM MgCl<sub>2</sub>, 2 mM DTT, 0.05 U/mL dialyzed yeast inorganic pyrophosphatase) with  $\gamma$ -<sup>32</sup>[P]-ATP (20 μM) and L-Ala (1 mM). Aliquots were quenched at different time points and spun in 96-well Multiscreen filter plates (Millipore) with activated charcoals as described previously<sup>29</sup>. The flow-through samples were counted in a MicroBeta plate reader (PerkinElmer). The amount of the released <sup>32</sup>[P]-phosphate was used to determine the concentration of active enzymes.

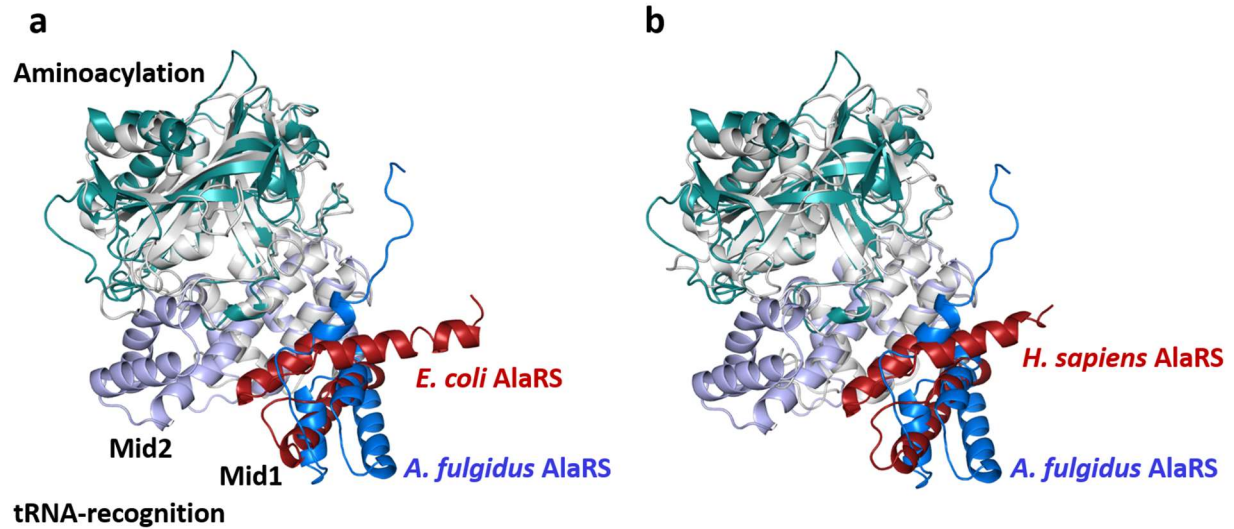
### Aminoacylation Assays

Aminoacylation with wild-type tRNA<sup>Ala</sup> was performed by incubating purified enzyme (5 nM) in assay buffer (50 mM HEPES, pH 7.5, 20 mM KCl, 5 mM MgCl<sub>2</sub>, 2 mM DTT, 0.05 U/mL dialyzed yeast inorganic pyrophosphatase), with 4 mM ATP, 20 μM [<sup>3</sup>H]-L-Ala and 2 μM tRNA<sup>Ala</sup> at 25 °C. For reactions with G3:C70 tRNA<sup>Ala</sup>, 500 nM enzyme and 10 μM G3:C70 tRNA<sup>Ala</sup> was used, at 37 °C. Aliquots were quenched and precipitated in 96-well Multiscreen filter plates as described previously<sup>29</sup>. After washing and elution by NaOH, samples were counted in a MicroBeta plate reader (PerkinElmer).

### Structural Modelling

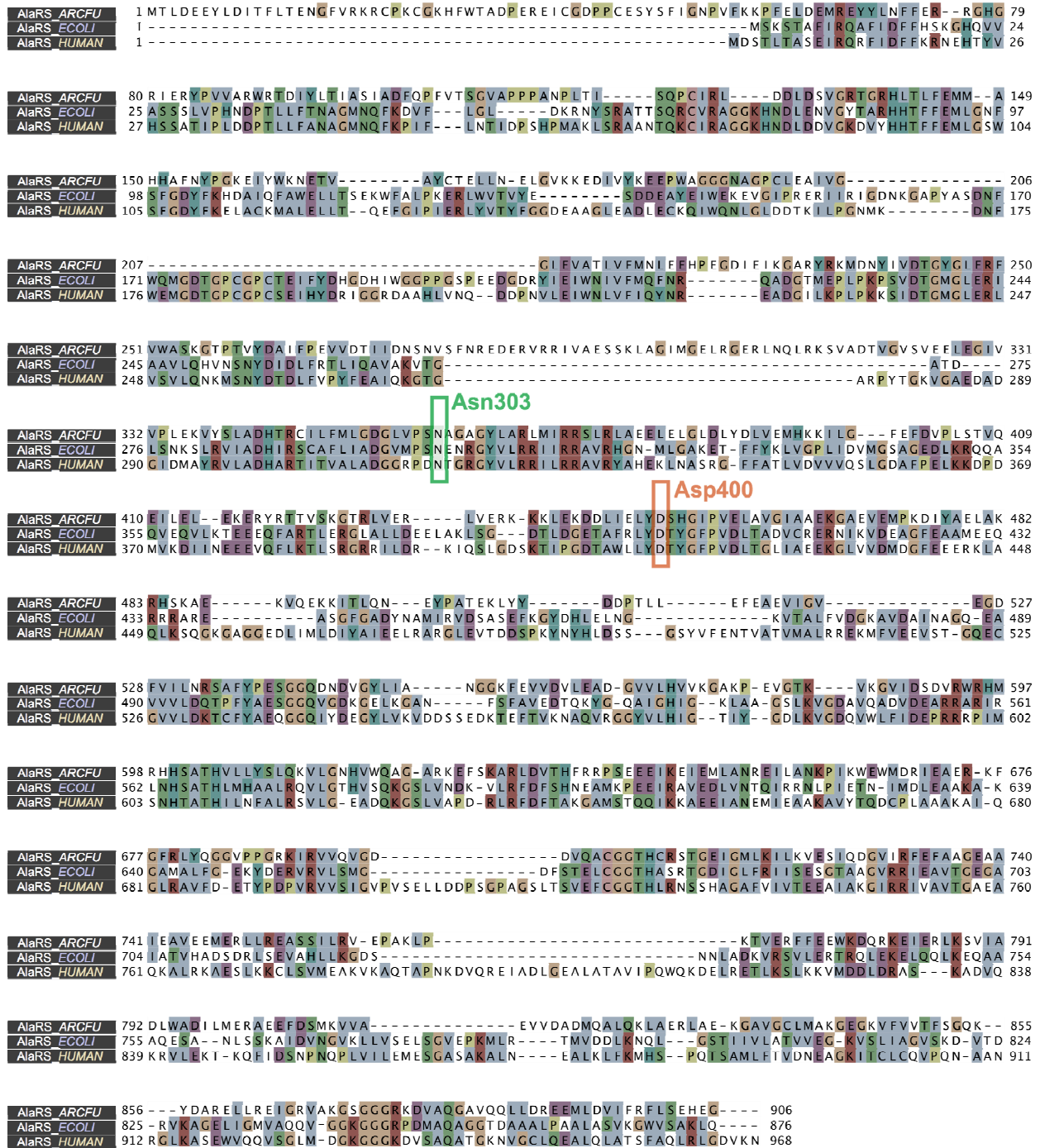
*E. coli* and *H. sapiens* AlaRS structures were first modeled using Modeller 8v2 (<http://salilab.org/modeller/>) based on the available *E. coli* AlaRS catalytic domain crystal structure and the newly solved *A. fulgidus* AlaRS•tRNA<sup>Ala</sup> complex structure and on multiple sequence alignments. The initial docking of tRNA<sup>Ala</sup> to *E. coli* and *H. sapiens* AlaRS structures was determined according to the structural superimposition of the N-terminal catalytic fragments. The conformation of the *E. coli* AlaRS Mid2 subdomain and the interface residues in both *E. coli* and *H. sapiens* structures were slightly adjusted for the tRNA binding.

## Supplementary Figure 1



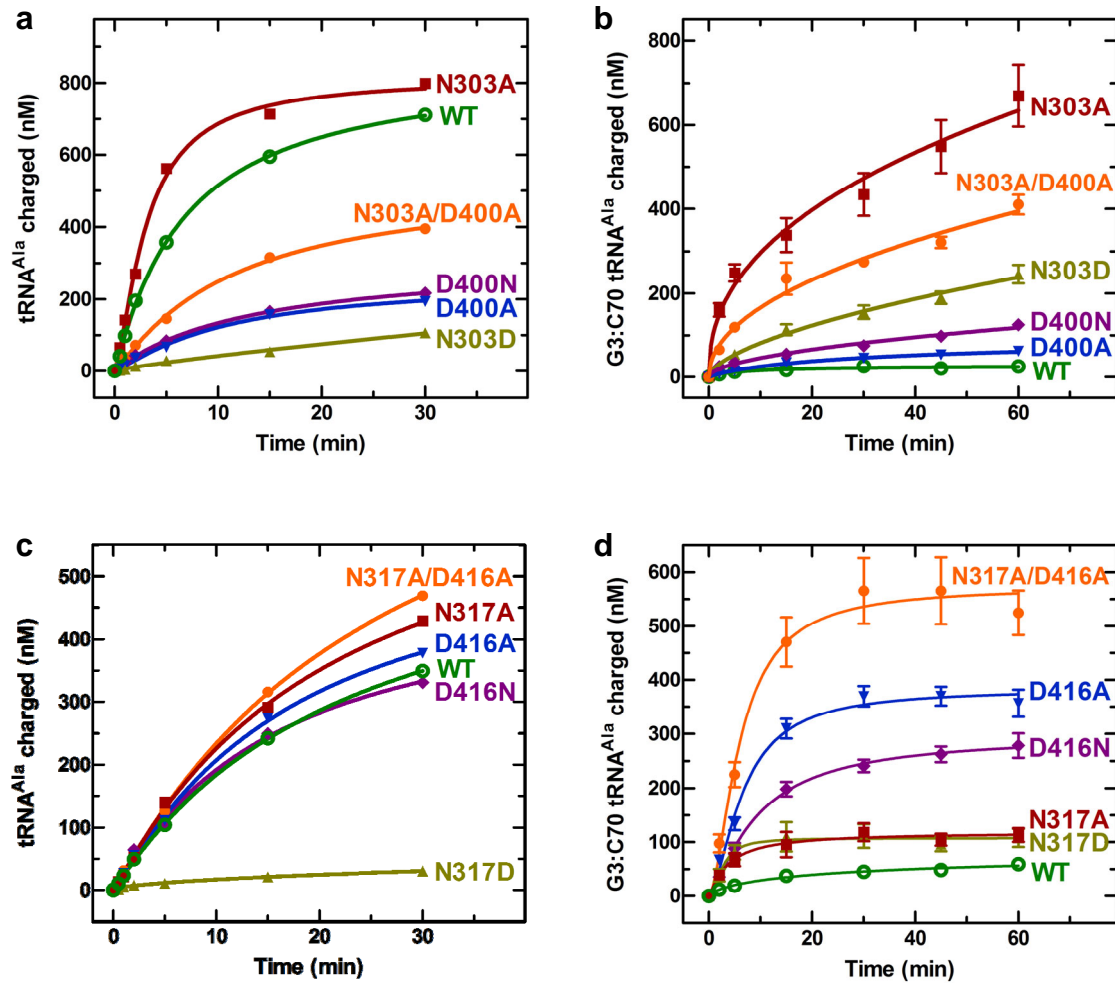
**Figure S1. Comparison of *E. coli*, *H. sapiens* and *A. fulgidus* catalytic fragment structures. a,** Superposition of the *E. coli* and *A. fulgidus* catalytic fragment structures. **b,** Superposition of the *H. sapiens* and *A. fulgidus* catalytic fragment structures. The *A. fulgidus* catalytic fragment is colored in teal, light blue, and dark blue for aminoacylation, Mid1, and Mid2 domains, respectively. *E. coli* and *H. sapiens* catalytic fragments are colored gray with the Mid2 subdomains highlighted in red. The *A. fulgidus* Mid1 domain contains a large archaea-specific insertion.

## Supplementary Figure 2



**Figure S2. Sequence alignments of full-length AlaRS from *A. fulgidus*, *E. coli* and *H. sapiens*.** The common structure consisting of an Asn and an Asp residue for the recognition of G3:U70 tRNA<sup>Ala</sup> by AlaRS is highlighted. The numbering is according to the *E. coli* AlaRS sequence.

### Supplementary Figure 3



**Figure S3. Aminoacylation activities of wild-type (WT) and mutant AlaRS enzymes towards tRNA<sup>Ala</sup> and G3:C70 tRNA<sup>Ala</sup>.** a-b, Aminoacylation of G3:U70 tRNA<sup>Ala</sup> (a) and G3:C70 tRNA<sup>Ala</sup> (b) by *E. coli* AlaRS enzymes. c-d, Aminoacylation of G3:U70 tRNA<sup>Ala</sup> (c) and G3:C70 tRNA<sup>Ala</sup> (d) by human AlaRS enzymes. Aminoacylation of G3:U70 tRNA<sup>Ala</sup> was carried out with 5 nM of each enzyme at 25 °C, while that of G3:C70 tRNA<sup>Ala</sup> was carried out with 500 nM of each enzyme at 37 °C. Assays were performed at pH 7.5. Error bars represent the s.e.m. of triplicate experiments.

**Supplementary Table 1. Verified AlaRS sequences with conserved Asn + Asp structure for G:U recognition.**

	Accession	Entry name	Kingdom	Gene names	Organism	Length
1	A0B6X3	SYA METTP	Archaea	alaS Mthe_0657	Methanosaeta thermophila (strain DSM 6194 / PT) (Methanothrix th)	913
2	A0RX10	SYA CENSY	Archaea	alaS CENSYa_1254	Cenarchaeum symbiosum	894
3	A1RT13	SYA PYRIL	Archaea	alaS Pisl_0919	Pyrobaculum islandicum (strain DSM 4184 / JCM 9189)	892
4	A1RWQ1	SYA THEPD	Archaea	alaS Tpen_0221	Thermofilum pendens (strain Hrk 5)	907
5	A2BN65	SYA HYPBU	Archaea	alaS Hbut_1607	Hyperthermus butylicus (strain DSM 5456 / JCM 9403)	921
6	A2ST90	SYA METLZ	Archaea	alaS Mlab_1380	Methanocorpusculum labreanum (strain ATCC 43576 / DSM 4855 /	913
7	A3CVP2	SYA METMJ	Archaea	alaS Memar_1513	Methanoculleus marisnigri (strain ATCC 35101 / DSM 1498 / JR1)	915
8	A3DNI3	SYA STAMF	Archaea	alaS Smar_1097	Staphylothermus marinus (strain ATCC 43588 / DSM 3639 / F1)	909
9	A3MXP1	SYA PYRCJ	Archaea	alaS Pcal_1993	Pyrobaculum calidifontis (strain JCM 11548 / VA1)	896
10	A4FZA5	SYA METM5	Archaea	alaS MmarC5_1241	Methanococcus maripaludis (strain C5 / ATCC BAA-1333)	892
11	A4WN07	SYA PYRAR	Archaea	alaS Pars_2228	Pyrobaculum arsenaticum (strain DSM 13514 / JCM 11321)	892
12	A5UKU6	SYA METS3	Archaea	alaS Msm_0619	Methanobrevibacter smithii (strain PS / ATCC 35061 / DSM 861)	897
13	A6US09	SYA METVS	Archaea	alaS Mevan_1384	Methanococcus vannielii (strain SB / ATCC 35089 / DSM 1224)	892
14	A6UUN3	SYA META3	Archaea	alaS Maeo_0621	Methanococcus aeolicus (strain Nankai-3 / ATCC BAA-1280)	910
15	A6VJ32	SYA METM7	Archaea	alaS MmarC7_1395	Methanococcus maripaludis (strain C7 / ATCC BAA-1331)	892
16	A7I7S4	SYA METB6	Archaea	alaS Mboo_1267	Methanoregula boonei (strain 6A8)	914
17	A8A8X8	SYA IGNH4	Archaea	alaS Igni_0196	Ignicoccus hospitalis (strain KIN4/I / DSM 18386 / JCM 14125)	901
18	A8MBI2	SYA CALMQ	Archaea	alaS Cmaq_1898	Caldivirga maquilingensis (strain DSMZ 13496 / IC-167)	899
19	A9A565	SYA NITMS	Archaea	alaS Nmar_0368	Nitrosopumilus maritimus (strain SCM1)	889
20	A9A6Q2	SYA METM6	Archaea	alaS MmarC6_0513	Methanococcus maripaludis (strain C6 / ATCC BAA-1332)	892
21	B0R7I0	SYA HALS3	Archaea	alaS OE4198F	Halobacterium salinarum (strain ATCC 29341 / DSM 671 / R1)	929
22	B1L762	SYA KORCO	Archaea	alaS Kcr_1545	Korarchaeum cryptofilum (strain OPF8)	895
23	B1YDH4	SYA THENV	Archaea	alaS Tneu_0900	Thermoproteus neutrophilus (strain DSM 2338 / JCM 9278 / V24St)	892
24	B5IBA6	B5IBA6 ACIB4	Archaea	alaS2 ABOONEI_543	Aciduliprofundum boonei (strain DSM 19572 / T469)	882
25	B5ICY4	B5ICY4 ACIB4	Archaea	alaS1 ABOO_1447 ABOONE	Aciduliprofundum boonei (strain DSM 19572 / T469)	882
26	B8D5P5	B8D5P5 DESK1	Archaea	alaS DKAM_1100	Desulfurococcus kamchatkensis (strain 1221n / DSM 18924)	908
27	B8GHL6	B8GHL6 METPE	Archaea	alaS Mpal_1287	Methanosphaerula palustris (strain ATCC BAA-1556 / DSM 19958 /	913
28	B9AGG4	B9AGG4 METSM	Archaea	alaS METSMIALI_01468	Methanobrevibacter smithii DSM 2375	897
29	B9LUG4	SYA HALLT	Archaea	alaS Hlac_0719	Halorubrum lacusprofundi (strain ATCC 49239 / DSM 5036 / JCM 8)	926
30	C3MR87	SYA SULIL	Archaea	alaS LS215_1905	Sulfolobus islandicus (strain L.S.2.15 / Lassen #1)	900
31	C3MXH6	SYA SULIM	Archaea	alaS M1425_1765	Sulfolobus islandicus (strain M.14.25 / Kamchatka #1)	900
32	C3MZC2	SYA SULIA	Archaea	alaS M1627_1883	Sulfolobus islandicus (strain M.16.27)	900
33	C3N7E3	SYA SULIY	Archaea	alaS YG5714_1881	Sulfolobus islandicus (strain Y.G.57.14 / Yellowstone #1)	900
34	C3NG91	SYA SULIN	Archaea	alaS YN1551_1044	Sulfolobus islandicus (strain Y.N.15.51 / Yellowstone #2)	900
35	C4KIK1	SYA SULIK	Archaea	alaS M164_1812	Sulfolobus islandicus (strain M.16.4 / Kamchatka #3)	900
36	C7NT23	C7NT23 HALUD	Archaea	alaS Huta_1929	Halorhabdus utahensis (strain DSM 12940 / JCM 11049 / AX-2)	926
37	C7P221	C7P221 HALMD	Archaea	alaS Hmuk_1124	Halomicrobium mukohataei (strain ATCC 700874 / DSM 12286 / JC	924
38	C7P7U1	C7P7U1 METFA	Archaea	alaS Mefer_0805	Methanocaldococcus fervens (strain DSM 4213 / JCM 157852 / AG8	892
39	C9RF77	C9RF77 METVM	Archaea	alaS Metvu_0364	Methanocaldococcus vulcanius (strain ATCC 700851 / DSM 12094 /	895
40	D0KS30	D0KS30 SULS9	Archaea	alaS Ssol_1313	Sulfolobus solfataricus (strain 98/2)	900
41	D1JFB4	D1JFB4 9ARCH	Archaea	alaS BSM_06990	Uncultured archaeon	919
42	D2PDA7	D2PDA7 SULID	Archaea	alaS LD85_2022	Sulfolobus islandicus (strain L.D.8.5 / Lassen #2)	900
43	D2RFS9	D2RFS9 ARCPA	Archaea	alaS Arcpr_0078	Archaeoglobus profundus (strain DSM 5631 / JCM 9629 / NBRC 10)	902
44	D2RSW0	D2RSW0 HALTV	Archaea	alaS Htur_0033	Haloterrigena turkmenica (strain ATCC 51198 / DSM 5511 / NCIMB	925
45	D2ZN69	D2ZN69 METSM	Archaea	alaS METSMIF1_02273	Methanobrevibacter smithii DSM 2374	897
46	D3E160	D3E160 METRM	Archaea	alaS mru_0492	Methanobrevibacter ruminantium (strain ATCC 35063 / DSM 1093 /	910
47	D3RX43	D3RX43 FERPA	Archaea	alaS Ferp_0888	Ferroglobus placidus (strain DSM 10642 / AEDII2DO)	901
48	D3S7L8	D3S7L8 METSF	Archaea	alaS MFS40622_0332	Methanocaldococcus sp. (strain FS406-22)	892
49	D3SV71	D3SV71 NATMM	Archaea	alaS Nmag_1908	Natrialba magadii (strain ATCC 43099 / DSM 3394 / NCIMB 2190 /	926
50	D4GZF1	D4GZF1 HALVD	Archaea	alaS1 alaS HVO_0206	Haloferax volcanii (strain ATCC 29605 / DSM 3757 / IFO 14742 / N	922
51	D5E9Q1	D5E9Q1 METMS	Archaea	alaS Mmah_0370	Methanohalophilus mahii (strain ATCC 35705 / DSM 5219 / SLP)	924
52	D5U265	D5U265 THEAM	Archaea	alaS Tagg_0943	Thermosphaera aggregans (strain DSM 11486 / M11TL)	908
53	D5VSD6	D5VSD6 METIM	Archaea	alaS Metin_0824	Methanocaldococcus infernus (strain DSM 11812 / JCM 15783 / ME	873
54	D7D9M2	D7D9M2 STAHD	Archaea	alaS Shell_1379	Staphylothermus hellenicus (strain DSM 12710 / JCM 10830 / BK2)	909
55	D7DR36	D7DR36 METV3	Archaea	alaS Mvol_1658	Methanococcus voltae (strain ATCC BAA-1334 / A3)	936
56	D7E9B0	D7E9B0 METEZ	Archaea	alaS Metev_1322	Methanohalobium evestigatum (strain DSM 3721 / OCM 161 / Z-73	922
57	D8J547	D8J547 HALJB	Archaea	alaS HacjB3_01175	Halalkalicoccus jeotgali (strain DSM 18796 / CECT 7217 / JCM 1458	921
58	D9PUH2	D9PUH2 METTM	Archaea	alaS MTBMA_c02620	Methanothermobacter marburgensis (strain DSM 2133 / 14651 / N	898
59	D9Q015	D9Q015 ACIS3	Archaea	alaS ASAC_0246	Acidilobus saccharovorans (strain DSM 16705 / VKM B-2471 / 345-	913
60	E0SP23	E0SP23 IGNAA	Archaea	alaS Igag_1163	Ignisphaera aggregans (strain DSM 17230 / JCM 13409 / AQ1.S1)	914
61	E1K3M1	E1K3M1 9EURY	Archaea	alaS MetokDRAFT_0311	Methanothermococcus okinawensis IH1	905
62	E1QRQ6	E1QRQ6 VULDI	Archaea	alaS Vdis_0016	Vulcanisaeta distributa (strain DSM 14429 / JCM 11212 / NBRC 10)	918
63	E1RGR2	E1RGR2 METP4	Archaea	alaS Mpet_1600	Methanoplanus petrolearius (strain DSM 11571 / OCM 486 / SEBR 4	912
64	E3GXBB	E3GXBB METFV	Archaea	alaS Mfer_0147	Methanothermobacter fervidus (strain ATCC 43054 / DSM 2088 / JCM 1)	908
65	E4NRJ7	E4NRJ7 HALBP	Archaea	alaS Hbor_00600	Halogeometricum borinquense (strain ATCC 700274 / DSM 11551 /	922
66	E6N4E7	E6N4E7 9ARCH	Archaea	CSUB_C0158 HGMM_F42C	Candidatus Caldiarchaeum subterraneum	909
67	E6N9W2	E6N9W2 9ARCH	Archaea	HGMM_F43G04C19	Candidatus Caldiarchaeum subterraneum	865
68	O27718	SYA METHH	Archaea	alaS MTH_1683	Methanobacterium thermoautotrophicum	898
69	O28029	SYA ARCFU	Archaea	alaS AF_2255	Archaeoglobus fulgidus	906
70	P35029	SYA SULAC	Archaea	alaS Saci_1455	Sulfolobus acidocaldarius	907
71	P61710	SYA METMP	Archaea	alaS MMP0397	Methanococcus maripaludis	892
72	P96041	SYA SULSO	Archaea	alaS SSO0341	Sulfolobus solfataricus	900
73	Q0W5Q9	SYA UNCMA	Archaea	alaS UNCMA_19110 RCIX9	Uncultured methanogenic archaeon RC-I	875
74	Q12U25	SYA METBU	Archaea	alaS Mbur_2186	Methanococcoides burtonii (strain DSM 6242)	923
75	Q18E76	SYA HALWD	Archaea	alaS HQ3670A	Haloquadratum walsbyi (strain DSM 16790)	923
76	Q2FQD6	SYA METHJ	Archaea	alaS Mhun_0039	Methanospirillum hungatei (strain JF-1 / DSM 864)	916



77	Q2NEW4	SYA METST	Archaea	alaS Msp_1262	Methanosphaera stadtmanae (strain DSM 3091)	903
78	Q3ITT7	SYA NATPD	Archaea	alaS NP0710A	Natronomonas pharaonis (strain DSM 2160 / ATCC 35678)	932
78	Q46CS0	SYA METBF	Archaea	alaS Mbar_A1361	Methanosarcina barkeri (strain Fusaro / DSM 804)	923
79	Q57984	SYA METJA	Archaea	alaS MJ0564	Methanocaldococcus jannaschii (Methanococcus jannaschii)	892
80	Q5UZE6	SYA HALMA	Archaea	alaS rrrAC2561	Haloarcula marismortui (Halobacterium marismortui)	927
81	Q6L1Z4	SYA PICTO	Archaea	alaS PTO0423	Picrophilus torridus (strain ATCC 700027 / DSM 9790 / JCM 10055)	870
82	Q8PWU0	SYA METMA	Archaea	alaS MM_1486	Methanosarcina mazei (Methanosarcina frisia)	926
83	Q8TU79	SYA METAC	Archaea	alaS MA_0194	Methanosarcina acetivorans	925
84	Q8TWW1	SYA METKA	Archaea	alaS MK0900	Methanopyrus kandleri	915
85	Q8ZSV6	SYA PYRAE	Archaea	alaS PAE3565	Pyrobaculum aerophilum (strain ATCC 51768 / IM2 / DSM 7523 / JCM 10014)	892
86	Q971J4	SYA SULTO	Archaea	alaS ST1364	Sulfolobus tokodaii (strain DSM 16993 / JCM 10545 / NBRC 100140)	904
87	Q97AH7	SYA THEVO	Archaea	alaS TV0833 TVG0850702	Thermoplasma volcanium (strain ATCC 51530 / DSM 4299 / IFO 15701)	876
86	Q9HJW4	SYA THEAC	Archaea	alaS Ta0849	Thermoplasma acidophilum (strain ATCC 25905 / DSM 1728 / JCM 10014)	871
87	Q9HN24	SYA HALSA	Archaea	alaS VNG_2283G	Halobacterium salinarium (Halobacterium halobium)	929
88	Q9Y9X3	SYA AERPE	Archaea	alaS APE_2166	Aeropyrum pernix	900
89	A0AIV3	SYA LISW6	Bacteria	alaS lwe1517	Listeria welshimeri serovar 6b (strain ATCC 35897 / DSM 20650 / S10)	879
90	A0JX88	SYA ARTS2	Bacteria	alaS Arth_2278	Arthrobacter sp. (strain FB24)	892
91	A0K6N4	SYA BURCH	Bacteria	alaS Bcen2424_1409	Burkholderia cenocepacia (strain HI2424)	874
92	A0KPG1	SYA AERHH	Bacteria	alaS AHA_3714	Aeromonas hydrophila subsp. hydrophila (strain ATCC 7966 / NCIB 10240)	874
93	A0KU94	SYA SHESA	Bacteria	alaS Shewana3_1128	Shewanella sp. (strain ANA-3)	874
94	A0L3J9	SYA MAGSM	Bacteria	alaS Mmc1_0013	Magnetococcus sp. (strain MC-1)	878
95	A0LLA3	SYA SYNFM	Bacteria	alaS Sfum_2527	Syntrophobacter fumaroxidans (strain DSM 10017 / MPOB)	885
96	A0LUJ2	SYA ACIC1	Bacteria	alaS Acel_1330	Acidothermus cellulolyticus (strain ATCC 43068 / 11B)	886
97	A0LX3	SYA GRAFK	Bacteria	alaS GFO_0230	Gramella forsetii (strain KT0803)	871
98	A0NP87	A0NP87_9RHOB	Bacteria	SIAM614_18034	Labrenzia aggregata IAM 12614	885
99	A0PPG6	SYA MYCUA	Bacteria	alaS MUL_1754	Mycobacterium ulcerans (strain Agy99)	901
100	A0Q151	SYA CLONN	Bacteria	alaS NT01CX_2280	Clostridium novyi (strain NT)	879
101	A0Q604	SYA FRATN	Bacteria	alaS FTN_0778	Francisella tularensis subsp. novicida (strain U112)	865
102	A0QI75	SYA MYCA1	Bacteria	alaS MAV_3431	Mycobacterium avium (strain 104)	900
103	A0QWQ4	SYA MYCS2	Bacteria	alaS MSMEG_3025	Mycobacterium smegmatis (strain ATCC 700084 / mc(2)155)	896
104	A0RJ00	SYA BACAH	Bacteria	alaS BALH_3972	Bacillus thuringiensis (strain AI Hakam)	880
105	A0Y5U7	A0Y5U7_9GAMM	Bacteria	ATW7_11666	Alteromonades bacterium TW-7	866
106	A0YHT3	A0YHT3_9GAMM	Bacteria	alaS GP2143_00065	Marine gamma proteobacterium HTCC2143	874
107	A0YQ44	A0YQ44_LYNBP	Bacteria	L8106_26902	Lyngbya sp. (strain PCC 8106) (Lyngbya aestuarii (strain CCY9616))	891
108	A0Z875	A0Z875_9GAMM	Bacteria	MGP2080_08254	Marine gamma proteobacterium HTCC2080	866
109	A0ZM23	A0ZM23_NODSP	Bacteria	N9414_11429	Nodularia spumigena CCY9414	880
110	A1A198	SYA BIFAA	Bacteria	alaS BAD_0700	Bifidobacterium adolescentis (strain ATCC 15703 / DSM 20083)	892
111	A1AEN7	SYA ECOK1	Bacteria	alaS Ecok1_26330 APECO1	Escherichia coli O1:K1 / APEC	876
112	A1ATU9	SYA PELPD	Bacteria	alaS Ppro_3176	Pelobacter propionicus (strain DSM 2379)	878
113	A1AXE0	SYA RUTMC	Bacteria	alaS Rmag_0882	Ruthia magnifica subsp. Calyptogena magnifica	865
114	A1AZL6	SYA PARDP	Bacteria	alaS Pden_0598	Paracoccus denitrificans (strain Pd 1222)	885
115	A1BD33	SYA CHLPD	Bacteria	alaS Cpha266_0243	Chlorobium phaeobacteroides (strain DSM 266)	888
116	A1EPU8	A1EPU8_VIBCH	Bacteria	alaS VCV52_0511	Vibrio cholerae V52	860
117	A1F830	A1F830_VIBCH	Bacteria	alaS VC274080_0641	Vibrio cholerae 2740-80	860
118	A1HU97	A1HU97_9FIRM	Bacteria	TcarDRAFT_0041	Thermosinus carboxydvorans Nor1	869
119	A1JK09	SYA YZER8	Bacteria	alaS YE0834	Yersinia enterocolitica serotype O:8 / biotype 1B (strain 8081)	875
120	A1K991	SYA AZOSB	Bacteria	alaS azo2780	Azoarcus sp. (strain BH72)	885
121	A1KLQ3	SYA MYCBP	Bacteria	alaS BCG_2578c	Mycobacterium bovis (strain BCG / Pasteur 1173P2)	904
122	A1KV20	SYA NEIMF	Bacteria	alaS NMC1518	Neisseria meningitidis serogroup C / serotype 2a (strain ATCC 700518)	874
122	A1QZ14	A1QZ14_BORT9	Bacteria	BT0220	Borrelia turicatae (strain 91E135)	593
123	A1R709	SYA ARTAT	Bacteria	alaS AAur_2281	Arthrobacter aurescens (strain TC1)	892
124	A1RHG5	SYA SHESW	Bacteria	alaS Sputw3181_1267	Shewanella sp. (strain W3-18-1)	874
125	A1S4E9	SYA SHEAM	Bacteria	alaS Sama_1048	Shewanella amazonensis (strain ATCC BAA-1098 / SB2B)	873
126	A1SJC7	SYA NOCSJ	Bacteria	alaS Noca_2407	Nocardioides sp. (strain BAA-499 / JS614)	896
127	A1T001	SYA PSYIN	Bacteria	alaS Ping_3380	Psychromonas ingrahamii (strain 37)	867
128	A1T8E8	SYA MYCVP	Bacteria	alaS Mvan_2640	Mycobacterium vanbaalenii (strain DSM 7251 / PYR-1)	898
129	A1TRL4	SYA ACIAC	Bacteria	alaS Aave_3035	Acidovorax avenae subsp. citrullii (strain AAC00-1)	948
130	A1TZ92	SYA MARAV	Bacteria	alaS Maqu_0965	Marinobacter aquaeolei (strain ATCC 700491 / DSM 11845 / VT8) (strain DSM 11845)	876
131	A1UFI3	SYA MYCSK	Bacteria	alaS Mkms_2393	Mycobacterium sp. (strain KMS)	897
132	A1USS4	SYA BARBK	Bacteria	alaS BARBAK583_0728	Bartonella bacilliformis (strain ATCC 35685 / KC583)	886
133	A1V3F2	SYA BURMS	Bacteria	alaS BMASAVP1_A1423	Burkholderia mallei (strain SAVP1)	874
134	A1VEQ6	SYA DESVV	Bacteria	alaS Dvul_1906	Desulfovibrio vulgaris subsp. vulgaris (strain DP4)	879
135	A1VQK2	SYA POLNA	Bacteria	alaS Pnap_2628	Polaromonas naphthalenivorans (strain CJ2)	874
136	A1W7D0	SYA ACISJ	Bacteria	alaS Ajs_1979	Acidovorax sp. (strain JS42)	874
137	A1ZYX1	A1ZYX1_9BACT	Bacteria	M23134_01747	Microscilla marina ATCC 23134	883
138	A2BNH2	SYA PROMS	Bacteria	alaS A9601_00451	Prochlorococcus marinus (strain AS9601)	886
139	A2BTZ9	SYA PROM5	Bacteria	alaS P9515_00511	Prochlorococcus marinus (strain MIT 9515)	886
140	A2BZG2	SYA PROM1	Bacteria	alaS NATL1_00581	Prochlorococcus marinus (strain NATL1A)	886
141	A2CDK7	SYA PROM3	Bacteria	alaS P9303_28371	Prochlorococcus marinus (strain MIT 9303)	892
142	A2PD12	A2PD12_VIBCH	Bacteria	alaS A55_0561	Vibrio cholerae 1587	593
143	A2PUQ0	A2PUQ0_VIBCH	Bacteria	alaS A51_B0525	Vibrio cholerae MZO-3	860
144	A2RDY3	SYA STRPG	Bacteria	alaS Spym50726	Streptococcus pyogenes serotype M5 (strain Manfredo)	872
145	A2RME6	SYA LACLAM	Bacteria	alaS limg_1906	Lactococcus lactis subsp. cremoris (strain MG1363)	872
146	A2S3D4	SYA BURM9	Bacteria	alaS BMA10229_A0455	Burkholderia mallei (strain NCTC 10229)	874
147	A2SI90	SYA METPP	Bacteria	alaS Mpe_A2323	Methylobium petroleiphilum (strain PM1)	875
146	A2TU46	A2TU46_9FLAO	Bacteria	MED134_11636	Dokdonia donghaensis MED134	870
147	A2TZ13	A2TZ13_9FLAO	Bacteria	MED152_07550	Polaribacter sp. MED152	873

148	A2VR13	A2VR13_9BURK	Bacteria	BCPG_00382	Burkholderia cenocepacia PC184	897
149	A2WAW1	A2WAW1_9BURK	Bacteria	BDAG_01855	Burkholderia dolosa AU0158	914
150	A3CLY3	SYA_STRSV	Bacteria	alaS SSA_0756	Streptococcus sanguinis (strain SK36)	872
151	A3D783	SYA_SHEB5	Bacteria	alaS Sbal_3115	Shewanella baltica (strain OS155 / ATCC BAA-1091)	874
152	A3ENA9	A3ENA9_VIBCH	Bacteria	alaS VCV51_0351	Vibrio cholerae V51	860
153	A3EWF8	A3EWF8_9BACT	Bacteria	UBAL2_80270014	Leptospirillum rubarum	891
154	A3GQD1	A3GQD1_VIBCH	Bacteria	alaS A5C_0557	Vibrio cholerae NCTC 8457	860
155	A3H478	A3H478_VIBCH	Bacteria	alaS A5E_0608_VCE_00038	Vibrio cholerae B33	860
156	A3HTM2	A3HTM2_9BACT	Bacteria	ALPR1_13255	Algoriphagus sp. PR1	874
157	A3IFB4	A3IFB4_9BACT	Bacteria	alaS BB14905_09530	Bacillus sp. B14905	742
158	A3IW40	A3IW40_9CHRO	Bacteria	CY0110_08771	Cyanotheca sp. CCY0110	879
159	A3J4Q1	A3J4Q1_9FLAO	Bacteria	FBBAL38_08050	Flavobacteria bacterium BAL38	878
160	A3JGQ5	A3JGQ5_9ALTE	Bacteria	MELB17_15711	Marinobacter sp. ELB17	876
161	A3JSX2	A3JSX2_9RHOB	Bacteria	alaS RB2150_02669	Rhodobacteraceae bacterium HTCC2150	886
162	A3K230	A3K230_9RHOB	Bacteria	alaS SSE37_05000	Sagittula stellata E-37	890
163	A3M3W2	SYA_ACIBT	Bacteria	alaS A1S_1176	Acinetobacter baumannii (strain ATCC 17978 / NCDC KC 755)	878
164	A3MJ36	SYA_BURM7	Bacteria	alaS BMA10247_0705	Burkholderia mallei (strain NCTC 10247)	874
165	A3N018	SYA_ACTP2	Bacteria	alaS APL_0654	Actinobacillus pleuropneumoniae serotype 5b (strain L20)	874
166	A3N8K7	SYA_BURP6	Bacteria	alaS BURPS668_1637	Burkholderia pseudomallei (strain 668)	874
167	A3NUB0	SYA_BURP0	Bacteria	alaS BURPS1106A_1660	Burkholderia pseudomallei (strain 1106a)	874
168	A3PA95	SYA_PROMO	Bacteria	alaS P9301_00471	Prochlorococcus marinus (strain MIT 9301)	886
169	A3PLJ1	SYA_RHOS1	Bacteria	alaS Rsph17029_2104	Rhodobacter sphaeroides (strain ATCC 17029 / ATH 2.4.9)	883
170	A3PZ44	SYA_MYCSJ	Bacteria	alaS Mjls_2387	Mycobacterium sp. (strain JLS)	897
171	A3QC89	SYA_SHELP	Bacteria	alaS Shew_1217	Shewanella loihica (strain ATCC BAA-1088 / PV-4)	874
172	A3RUL5	A3RUL5_RALSO	Bacteria	RRSL_02374	Ralstonia solanacearum UW551	880
173	A3SGP8	A3SGP8_9RHOB	Bacteria	EE36_14248	Sulfitobacter sp. EE-36	886
174	A3SNY7	A3SNY7_9RHOB	Bacteria	ISM_14965	Roseovarius nubinihibens ISM	888
174	A3T117	A3T117_9RHOB	Bacteria	NAS141_19374	Sulfitobacter sp. NAS-14.1	886
175	A3TLT6	A3TLT6_9MICO	Bacteria	JNB_04195	Janibacter sp. HTCC2649	897
176	A3TWT1	A3TWT1_9RHOB	Bacteria	OB2597_01687	Oceanicola batsensis HTCC2597	892
177	A3U723	A3U723_CROAH	Bacteria	CA2559_04755	Croceibacter atlanticus (strain ATCC BAA-628 / HTCC2559 / KCTC 1	870
178	A3UDY1	A3UDY1_9RHOB	Bacteria	OA2633_04771	Oceanicaulis sp. HTCC2633	886
179	A3UV43	A3UV43_VIBSP	Bacteria	V12B01_08195	Vibrio splendidus 12B01	860
180	A3V9G2	A3V9G2_9RHOB	Bacteria	SKA53_03344	Loktanella vestfoldensis SKA53	884
181	A3VJG4	A3VJG4_9RHOB	Bacteria	RB2654_03899	Maritimibacter alkaliphilus HTCC2654	882
182	A3VX41	A3VX41_9RHOB	Bacteria	ROS217_20882	Roseovarius sp. 217	892
183	A3WBB9	A3WBB9_9SPHN	Bacteria	NAP1_06990	Erythrobacter sp. NAP1	887
184	A3WNA0	A3WNA0_9GAMM	Bacteria	OS145_10560	Idiomarina baltica OS145	867
185	A3WVK6	A3WVK6_9BRAD	Bacteria	NB311A_01385	Nitrobacter sp. Nb-311A	892
185	A3XAX3	A3XAX3_9RHOB	Bacteria	MED193_04361	Roseobacter sp. MED193	883
186	A3XK04	A3XK04_LEEBM	Bacteria	MED217_03155	Leeuwenhoekella blandensis (strain CECT 7118 / CCUG 51940 / Mi	849
186	A3XXN3	A3XXN3_9VIBR	Bacteria	MED222_22136	Vibrio sp. MED222	860
187	A3YGY2	A3YGY2_9GAMM	Bacteria	alaS MED121_20256	Marinomonas sp. MED121	871
188	A3YU59	A3YU59_9SYNE	Bacteria	WH5701_04865	Synechococcus sp. WH 5701	896
189	A3Z3G5	A3Z3G5_9SYNE	Bacteria	RS9917_06455	Synechococcus sp. RS9917	911
190	A4ACW8	A4ACW8_9GAMM	Bacteria	KT71_18876	Congregibacter litoralis KT71	867
191	A4AJV8	A4AJV8_9ACTN	Bacteria	A20C1_03116	Marine actinobacterium PHSC20C1	884
192	A4AUE8	A4AUE8_MARSH	Bacteria	FB2170_08839	Maribacter sp. (strain HTCC2170 / KCCM 42371)	871
193	A4BCJ2	A4BCJ2_9GAMM	Bacteria	MED297_13582	Reinekea blandensis MED297	868
194	A4BU39	A4BU39_9GAMM	Bacteria	NB231_12521	Nitrospiro mobilis Nb-231	869
195	A4BYG0	A4BYG0_9FLAO	Bacteria	PI23P_05867	Polaribacter irgensii 23-P	872
196	A4CCF8	A4CCF8_9GAMM	Bacteria	PTD2_14467	Pseudoalteromonas tunicata D2	866
197	A4CJG2	A4CJG2_ROBBH	Bacteria	RB2501_09210	Robiginitalea bifurcata (strain ATCC BAA-864 / HTCC2501 / KCTC	871
198	A4CXB1	A4CXB1_SYNPV	Bacteria	WH7805_10284	Synechococcus sp. (strain WH7805)	894
199	A4E6Q2	A4E6Q2_9ACTN	Bacteria	COLAER_00077	Collinsella aerofaciens ATCC 25986	878
200	A4EKU0	A4EKU0_9RHOB	Bacteria	RCCS2_17951	Roseobacter sp. CCS2	885
201	A4ERJ4	A4ERJ4_9RHOB	Bacteria	alaS RSK20926_19217	Roseobacter sp. SK209-2-6	883
202	A4FBD3	SYA_SACEN	Bacteria	alaS SACE_2052	Saccharopolyspora erythraea (strain NRRL 23338)	890
203	A4G2S9	SYA_HERAR	Bacteria	alaS HEAR0616	Herminiimonas arsenicoxydans	869
204	A4GJ52	A4GJ52_9DELT	Bacteria		Uncultured marine Nitrospinaceae bacterium	878
205	A4GJZ2	A4GJZ2_9BACT	Bacteria	MBMO_EB80-69G07.0020	Uncultured marine bacterium EB80_69G07	888
206	A4IR80	SYA_GEOTN	Bacteria	alaS GTNG_2489	Geobacillus thermodenitrificans (strain NG80-2)	878
207	A4IZ01	SYA_FRATW	Bacteria	alaS FTW_1402	Francisella tularensis subsp. tularensis (strain WY96-3418)	865
208	A4J2K4	SYA_DESRM	Bacteria	alaS Dred_0769	Desulfotomaculum reducens (strain MI-1)	878
209	A4JDM9	SYA_BURVG	Bacteria	alaS Bcep1808_1373	Burkholderia vietnamiensis (strain G4 / LMG 22486) (Burkholderia	874
210	A4KNY1	A4KNY1_MYCTU	Bacteria	TBHG_02492	Mycobacterium tuberculosis str. Haarlem	904
211	A4KRN3	A4KRN3_FRATU	Bacteria	FTHG_01047	Francisella tularensis subsp. holarctica 257	865
212	A4MGH6	A4MGH6_BURPS	Bacteria	alaS BURPS305_1037	Burkholderia pseudomallei 305	874
213	A4MWQ5	A4MWQ5_HAEIF	Bacteria	alaS CGSHi22121_04595	Haemophilus influenzae 22.1-21	874
214	A4N355	A4N355_HAEIF	Bacteria	CGSHi22421_04798	Haemophilus influenzae R3021	874
215	A4N7M2	A4N7M2_HAEIF	Bacteria	CGSHi3655_06959	Haemophilus influenzae 3655	874
216	A4NF84	A4NF84_HAEIF	Bacteria	alaS CGSHiAA_04198	Haemophilus influenzae PittAA	874
217	A4NKB3	A4NKB3_HAEIF	Bacteria	alaS CGSHiHH_03458	Haemophilus influenzae PittHH	874
218	A4NPL1	A4NPL1_HAEIF	Bacteria	alaS CGSHiII_06419	Haemophilus influenzae PittII	874
219	A4NX67	A4NX67_HAEIF	Bacteria	alaS CGSHiR3021_07607	Haemophilus influenzae 22.4-21	616
220	A4QEK7	SYA_CORGB	Bacteria	alaS cgR_1680	Corynebacterium glutamicum (strain R)	888
221	A4SGJ6	SYA_PROVI	Bacteria	alaS Cvib_1595	Prosthecochloris vibriiformis (strain DSM 265) (Chlorobium vibriof	885



222	A4SS99	SYA AERS4	Bacteria	alaS ASA_3811	Aeromonas salmonicida (strain A449)	874
223	A4SZL8	SYA POLSQ	Bacteria	alaS Pnuc_1719	Polynucleobacter sp. (strain QLV-P1DMWA-1)	874
224	A4TBW4	SYA MYCGI	Bacteria	alaS Mflv_3763	Mycobacterium gilvum (strain PYR-GCK) (Mycobacterium flavescens)	898
225	A4TQ52	SYA YERPP	Bacteria	alaS YPDSF_3056	Yersinia pestis (strain Pestoides F)	875
226	A4TZR5	A4TZR5_9PROT	Bacteria	alaS MGR_3274	Magnetospirillum gryphiswaldense	881
227	A4VJB3	SYA PSEU5	Bacteria	alaS PST_1369	Pseudomonas stutzeri (strain A1501)	874
228	A4VVR3	SYA STRSY	Bacteria	alaS SSU05_1236	Streptococcus suis (strain 05ZYH33)	872
229	A4W221	SYA STRS2	Bacteria	alaS SSU98_1252	Streptococcus suis (strain 98HAH33)	872
230	A4WDQ6	SYA ENT38	Bacteria	alaS Ent638_3172	Enterobacter sp. (strain 638)	875
231	A4WV47	SYA RHOS5	Bacteria	alaS RspH17025_2372	Rhodobacter sphaeroides (strain ATCC 17025 / ATH 2.4.3)	883
232	A4X5Z0	SYA SALTO	Bacteria	alaS Strop_1828	Salinispora tropica (strain ATCC BAA-916 / DSM 44818 / CNB-440)	892
233	A4XKP4	SYA CALS8	Bacteria	alaS Ccac_1894	Caldicellulosiruptor saccharolyticus (strain ATCC 43494 / DSM 8903)	881
234	A4XWE2	SYA PSEMY	Bacteria	alaS Pmen_2903	Pseudomonas mendocina (strain ymp)	874
235	A4Y931	SYA SHEPC	Bacteria	alaS Sputcn32_2745	Shewanella putrefaciens (strain CN-32 / ATCC BAA-453)	874
236	A4YXQ6	SYA BRASO	Bacteria	alaS BRADO4981	Bradyrhizobium sp. (strain ORS278)	891
237	A5CD03	SYA ORITB	Bacteria	alaS OTBS_0574	Orientia tsutsugamushi (strain Boryong) (Rickettsia tsutsugamushi)	891
238	A5CRZ5	SYA CLAM3	Bacteria	alaS CMM_1802	Clavibacter michiganensis subsp. michiganensis (strain NCPPB 382)	885
239	A5CVU0	SYA VESOH	Bacteria	alaS COSY_0806	Vesicomysocius okutanii subsp. Calyptogena okutanii (strain HA)	865
240	A5D3F4	SYA PELTS	Bacteria	alaS PTH_1060/PTH_1061	Pelotomaculum thermopropionicum (strain DSM 13744 / JCM 1097)	877
240	A5EML9	SYA BRASB	Bacteria	alaS BBta_5448	Bradyrhizobium sp. (strain BTAi1 / ATCC BAA-1182)	896
241	A5EW88	SYA DICNV	Bacteria	alaS DNO_0286	Dichelobacter nodosus (strain VCS1703A)	873
241	A5F9B7	SYA VIBC3	Bacteria	alaS VCO395_A0072_VC395	Vibrio cholerae serotype O1 (strain ATCC 39541 / Oqawa 395 / O395)	860
242	A5FIP9	SYA FLAJ1	Bacteria	alaS Fjoh_1894	Flavobacterium johnsoniae (strain ATCC 17061 / DSM 2064 / UW10)	879
242	A5FXC2	SYA ACICJ	Bacteria	alaS Acry_1038	Acidiphilium cryptum (strain JF-5)	878
243	A5GD98	SYA GEOUR	Bacteria	alaS Gura_0222	Geobacter uraniireducens (strain Rf4) (Geobacter uraniumreducens)	876
244	A5GPF9	SYA SYNPW	Bacteria	alaS SynWH7803_2398	Synechococcus sp. (strain WH7803)	891
245	A5GWM4	SYA SYNRR3	Bacteria	alaS SynRCC307_2380	Synechococcus sp. (strain RCC307)	882
246	A5I4Z5	SYA CLOBH	Bacteria	alaS CBO2564_CLC_2435	Clostridium botulinum (strain Hall / ATCC 3502 / NCTC 13319 / Typ)	879
247	A5ICV6	SYA LEGPC	Bacteria	alaS LPC_1243	Legionella pneumophila (strain Corby)	860
248	A5IMH8	SYA THEP1	Bacteria	alaS Tpet_1387	Thermotoga petrophila (strain RKU-1 / ATCC BAA-488 / DSM 13995)	863
249	A5ITE5	SYA STAA9	Bacteria	alaS SaurJH9_1675	Staphylococcus aureus (strain JH9)	876
250	A5IYK5	SYA MYCAP	Bacteria	alaS MAG4160	Mycoplasma agalactiae (strain PG2)	880
251	A5KL29	A5KL29_9FIRM	Bacteria	RUMTOR_00933	Ruminococcus torques ATCC 27756	880
252	A5L312	A5L312_9GAMM	Bacteria	alaS VSWAT3_20595	Vibrionales bacterium SWAT-3	860
253	A5LES2	A5LES2_STRPN	Bacteria	alaS CGSSp3BS71_04579	Streptococcus pneumoniae SP3-BS71	872
254	A5LNG4	A5LNG4_STRPN	Bacteria	CGSSp6BS73_04985	Streptococcus pneumoniae SP6-BS73	872
255	A5LTK3	A5LTK3_STRPN	Bacteria	alaS CGSSp9BS68_10220	Streptococcus pneumoniae SP9-BS68	872
256	A5M0S0	A5M0S0_STRPN	Bacteria	alaS CGSSp11BS70_01712	Streptococcus pneumoniae SP11-BS70	872
257	A5M7Z4	A5M7Z4_STRPN	Bacteria	CGSSp14BS69_03503	Streptococcus pneumoniae SP14-BS69	449
258	A5MHF6	A5MHF6_STRPN	Bacteria	alaS CGSSp18BS74_00801	Streptococcus pneumoniae SP18-BS74	872
259	A5MML7	A5MML7_STRPN	Bacteria	CGSSp19BS75_06627	Streptococcus pneumoniae SP19-BS75	872
260	A5MSZ9	A5MSZ9_STRPN	Bacteria	CGSSp23BS72_05265	Streptococcus pneumoniae SP23-BS72	872
261	A5N7T5	SYA CLOK5	Bacteria	alaS CKL_1324	Clostridium kluyveri (strain ATCC 8527 / DSM 555 / NCIMB 10680)	879
261	A5P753	A5P753_9SPHN	Bacteria	ED21_26823	Erythrobacter sp. SD-21	887
262	A5TLU9	A5TLU9_BURMA	Bacteria	alaS BMA721280_A0255	Burkholderia mallei 2002721280	874
262	A5TW59	A5TW59_FUSNP	Bacteria	alaS FNP_1351	Fusobacterium nucleatum subsp. polymorphum ATCC 10953	867
263	A5U5Q5	SYA MYCTA	Bacteria	alaS MRA_2584	Mycobacterium tuberculosis (strain ATCC 25177 / H37Ra)	904
264	A5UDR0	SYA HAEIE	Bacteria	alaS CGSHiEE_07990	Haemophilus influenzae (strain PittEE)	874
263	A5UHW6	SYA HAEIG	Bacteria	alaS CGSHiGG_07565	Haemophilus influenzae (strain PittGG)	874
264	A5UY81	SYA ROSS1	Bacteria	alaS CGSSp18BS74_00801	Roseiflexus sp. (strain RS-1)	905
265	A5V3L0	SYA SPHWW	Bacteria	alaS Swit_0508	Sphingomonas wittichii (strain RW1 / DSM 6014 / JCM 10273)	887
266	A5VIX7	A5VIX7_LACRD	Bacteria	Lreu_0533	Lactobacillus reuteri (strain DSM 20016)	884
267	A5VQX4	SYA BRUO2	Bacteria	alaS BOV_1164	Brucella ovis (strain ATCC 25840 / 63/290 / NCTC 10512)	885
268	A5W0D9	SYA PSEP1	Bacteria	alaS Pput_1441	Pseudomonas putida (strain F1 / ATCC 700007)	874
269	A5WFW1	SYA PSYWF	Bacteria	alaS PsycPRwf_1611	Psychrobacter sp. (strain PRwf-1)	903
270	A5WQG4	A5WQG4_MYCTF	Bacteria	TBFG_12576	Mycobacterium tuberculosis (strain F11)	904
271	A5XI03	A5XI03_BURMA	Bacteria	alaS BMAFMH_C0415	Burkholderia mallei FMH	874
272	A5XNU1	A5XNU1_BURMA	Bacteria	alaS BMAJHU_C0438	Burkholderia mallei JHU	874
273	A5Z6C2	A5Z6C2_9FIRM	Bacteria	EUBVEN_01255	Eubacterium ventriosum ATCC 27560	886
274	A5ZFM3	A5ZFM3_9BACE	Bacteria	BACCAC_01688	Bacteroides caccae ATCC 43185	872
275	A5ZQA6	A5ZQA6_9FIRM	Bacteria	RUMOBE_01176	Ruminococcus obeum ATCC 29174	683
276	A6A6C5	A6A6C5_VIBCH	Bacteria	alaS A5A_0529	Vibrio cholerae MZO-2	860
277	A6AEW3	A6AEW3_VIBCH	Bacteria	alaS A59_0589	Vibrio cholerae 623-39	860
278	A6AW09	A6AW09_VIBHA	Bacteria	alaS A1Q_0277	Vibrio harveyi HY01	860
279	A6B6D7	A6B6D7_VIBPA	Bacteria	alaS A79_4202	Vibrio parahaemolyticus AQ3810	860
280	A6BDT6	A6BDT6_9FIRM	Bacteria	DORLON_00452	Dorea longicatena DSM 13814	887
281	A6BYJ4	A6BYJ4_YERPE	Bacteria	alaS YPE_4111	Yersinia pestis CA88-4125	875
282	A6D4F3	A6D4F3_9VIBR	Bacteria	alaS VSAK1_02069	Vibrio shilonii AK1	861
283	A6DGR8	A6DGR8_9BACT	Bacteria	LNTAR_23384	Lentisphaera araneosa HTCC2155	899
284	A6E087	A6E087_9RHOB	Bacteria	alaS RTM1035_08754	Roseovarius sp. TM1035	893
285	A6ECC4	A6ECC4_9SPHI	Bacteria	PBAL39_18189	Pedobacter sp. BAL39	900
286	A6EMB9	A6EMB9_9BACT	Bacteria	alaS SCB49_07917	Unidentified eubacterium SCB49	872
287	A6F5K3	A6F5K3_9ALTE	Bacteria	MDG893_09150	Marinobacter algicola DG893	876
287	A6FG67	A6FG67_9GAMM	Bacteria	PE36_22815	Moritella sp. PE36	873
288	A6FSR3	A6FSR3_9RHOB	Bacteria	RAZWK3B_15248	Roseobacter sp. AzwK-3b	887
289	A6GT92	A6GT92_9BURK	Bacteria	alaS LMED105_07508	Limnobacter sp. MED105	878
290	A6H0Y3	SYA FLAPJ	Bacteria	alaS FP1941	Flavobacterium psychrophilum (strain JIP02/86 / ATCC 49511)	887

289	A6L1L8	SYA BACV8	Bacteria	alaS BVU_1908	Bacteroides vulgatus (strain ATCC 8482 / DSM 1447 / NCTC 11154)	871
290	A6LEZ8	SYA PARD8	Bacteria	alaS BDI_2543	Parabacteroides distasonis (strain ATCC 8503 / DSM 20701 / NCTC 873)	873
291	A6LMH9	SYA THEM4	Bacteria	alaS Tmel_1281	Thermosiphonia melanesiensis (strain B1429 / DSM 12029)	859
291	A6LSF6	SYA CLOB8	Bacteria	alaS Cbei_1104	Clostridium beijerinckii (strain ATCC 51743 / NCIMB 8052) (Clostridium)	879
292	A6NU17	A6NU17_9BACE	Bacteria	BACCAP_01697	Bacteroides capillosus ATCC 29799	890
293	A6Q576	SYA NITS5	Bacteria	alaS NIS_1528	Nitratiruptor sp. (strain SB155-2)	850
294	A6QHF9	SYA STAAE	Bacteria	alaS NWMN_1519	Staphylococcus aureus (strain Newman)	876
295	A6QKU6	A6QKU6_ONYPE	Bacteria	alaS	Onion yellows phytoplasma OY-W	864
296	A6SVH6	SYA JANMA	Bacteria	alaS mma_0583	Janthinobacterium sp. (strain Marseille) (Minibacterium massiliensis)	869
297	A6TCV9	SYA KLEP7	Bacteria	alaS KPN78578_29690_KPN	Klebsiella pneumoniae subsp. pneumoniae (strain ATCC 700721 / M	875
298	A6TQZ4	SYA ALKMQ	Bacteria	alaS Amet_2458	Alkaliphilus metalliredigens (strain QYMF)	880
299	A6U287	SYA STAA2	Bacteria	alaS SaurJH1_1709	Staphylococcus aureus (strain JH1)	876
300	A6U9N4	SYA SINMW	Bacteria	alaS Smed_1521	Sinorhizobium medicae (strain WSM419) (Ensifer medicae)	887
301	A6VA71	SYA PSEA7	Bacteria	alaS PSPA7_4612	Pseudomonas aeruginosa (strain PA7)	874
302	A6VKD6	SYA ACTS2	Bacteria	alaS Asuc_0052	Actinobacillus succinogenes (strain ATCC 55618 / 130Z)	874
303	A6W1F1	SYA MARMS	Bacteria	alaS Mmwyl1_3628	Marinomonas sp. (strain MWYL1)	872
304	A6WCF7	SYA KINRD	Bacteria	alaS Krad_3032	Kineococcus radiotolerans (strain ATCC BAA-149 / DSM 14245 / SR	893
305	A6WR16	SYA SHEB8	Bacteria	alaS Shew185_3124	Shewanella baltica (strain OS185)	874
306	A6X0E9	SYA OCHA4	Bacteria	alaS Oant_1987	Ochrobactrum anthropi (strain ATCC 49188 / DSM 6882 / NCTC 12	885
306	A6XXS7	A6XXS7_VIBCH	Bacteria	alaS A33_0519	Vibrio cholerae AM-19226	860
307	A7A636	A7A636_BIFAD	Bacteria	BIFADO_01314	Bifidobacterium adolescentis L2-32	892
308	A7AIQ1	A7AIQ1_9PORP	Bacteria	PARMER_03308	Parabacteroides merdae ATCC 43184	875
309	A7AYC0	A7AYC0_RUMGN	Bacteria	RUMGNA_00285	Ruminococcus gnavus ATCC 29149	879
310	A7BCJ7	A7BCJ7_9ACTO	Bacteria	ACTODO_01378	Actinomyces odontolyticus ATCC 17982	902
308	A7FLR7	SYA YERP3	Bacteria	alaS YpsIP31758_3238	Yersinia pseudotuberculosis serotype O:1b (strain IP 31758)	875
309	A7FWJ5	SYA CLOB1	Bacteria	alaS CLB_2505	Clostridium botulinum (strain ATCC 19397 / Type A)	879
310	A7GGF1	SYA CLOBL	Bacteria	alaS CLI_2627	Clostridium botulinum (strain Langeland / NCTC 10281 / Type F)	879
311	A7GT67	SYA BACCN	Bacteria	alaS Bcer98_3101	Bacillus cereus subsp. cytotoxigenus (strain NVH 391-98)	880
312	A7HH87	SYA ANADF	Bacteria	alaS Anaef109_3904	Anaeromyxobacter sp. (strain Fw109-5)	904
313	A7HN59	SYA FERNB	Bacteria	alaS Fnod_1499	Fervidobacterium nodosum (strain ATCC 35602 / DSM 5306 / Rt17-	867
310	A7HWA5	SYA PARL1	Bacteria	alaS Plav_2579	Parvibaculum lavamentivorans (strain DS-1 / DSM 13023 / NCIMB	892
311	A7IMR0	SYA XANP2	Bacteria	alaS Xaut_4081	Xanthobacter autotrophicus (strain ATCC BAA-1158 / Py2)	884
311	A7JCW9	A7JCW9_FRATT	Bacteria	FTBG_00455	Francisella tularensis subsp. tularensis FSC033	865
312	A7JHC7	A7JHC7_FRANO	Bacteria	FTCG_00305	Francisella novicida GA99-3549	865
313	A7JLH7	A7JLH7_FRANO	Bacteria	FTDG_00357	Francisella novicida GA99-3548	865
314	A7JQM3	A7JQM3_PASHA	Bacteria	alaS MHA_0381	Neisseria haemolytica PHL213	875
315	A7K6B8	A7K6B8_VIBSE	Bacteria	alaS VEA_002521_VEx25_1	Vibrio sp. (strain Ex25)	860
316	A7M3X4	A7M3X4_BACOV	Bacteria	BACOVA_04814	Bacteroides ovatus ATCC 8483	872
317	A7MJ41	SYA ENTS8	Bacteria	alaS ESA_00569	Enterobacter sakazakii (strain ATCC BAA-894)	875
318	A7MYT5	SYA VIBHB	Bacteria	alaS VIBHAR_03511	Vibrio Harveyi (strain ATCC BAA-1116 / BB120)	865
319	A7NCD9	SYA FRATF	Bacteria	alaS FTA_1166	Francisella tularensis subsp. holarctica (strain FTNF002-00 / FTA)	865
320	A7NQA5	SYA ROSCS	Bacteria	alaS Rcas_3711	Roseiflexus castenholzii (strain DSM 13941 / HLO8)	905
321	A7V7V7	A7V7V7_BACUN	Bacteria	BACUNI_03673	Bacteroides uniformis ATCC 8492	872
322	A7VB88	A7VB88_9CLOT	Bacteria	CLOL250_00149	Clostridium sp. L2-50	888
323	A7VTK0	A7VTK0_9CLOT	Bacteria	CLOLEP_01892	Clostridium leptum DSM 753	877
324	A7X328	SYA STAA1	Bacteria	alaS SAHV_1605	Staphylococcus aureus (strain Mu3 / ATCC 700698)	876
325	A7YTY0	A7YTY0_FRATU	Bacteria	FTAG_00379	Francisella tularensis subsp. holarctica FSC022	865
326	A7Z735	SYA BACA2	Bacteria	alaS RBAM_024510	Bacillus amyloliquefaciens (strain FZB42)	878
327	A7ZQC5	SYA ECO24	Bacteria	alaS EcE24377A_2980	Escherichia coli O139:H28 (strain E24377A / ETEC)	876
328	A8A3H4	SYA ECOHS	Bacteria	alaS EchS_A2833	Escherichia coli O9:H4 (strain HS)	876
329	A8ANQ1	SYA CITK8	Bacteria	alaS CKO_04048	Citrobacter koseri (strain ATCC BAA-895 / CDC 4225-83 / SGSC469	875
330	A8AY18	SYA STRGC	Bacteria	alaS SGO_1570	Streptococcus gordonii (strain Challis / ATCC 35105 / CH1 / DL1 / \	872
331	A8EEG7	A8EEG7_BURPS	Bacteria	alaS BURPS406E_H1316	Burkholderia pseudomallei 406e	874
332	A8EWI6	SYA ARCB4	Bacteria	alaS Abu_2092	Arcobacter butzleri (strain RM4018)	851
333	A8F078	SYA RICCK	Bacteria	alaS A1E_05485	Rickettsia canadensis (strain McKiel)	878
334	A8F323	SYA RICM5	Bacteria	alaS RMA_1379	Rickettsia massiliae (strain MtU5)	878
335	A8F866	SYA THELT	Bacteria	alaS Tlet_1796	Thermotoga lettingae (strain ATCC BAA-301 / DSM 14385 / TMO)	858
336	A8FFM9	SYA BACP2	Bacteria	alaS BPUM_2380	Bacillus pumilus (strain SAFR-032)	878
337	A8FSV6	SYA SHESH	Bacteria	alaS Ssed_1318	Shewanella sediminis (strain HAW-EB3)	874
338	A8G242	SYA PROM2	Bacteria	alaS P9215_00541	Prochlorococcus marinus (strain MIT 9215)	886
339	A8GA09	SYA SERP5	Bacteria	alaS Spro_0843	Serratia proteamaculans (strain 568)	875
340	A8GQ73	SYA RICAH	Bacteria	alaS A1C_06625	Rickettsia akari (strain Hartford)	878
341	A8GU16	SYA RICRS	Bacteria	alaS A1G_07260	Rickettsia rickettsii (strain Sheila Smith)	877
342	A8H1T6	SYA SHEPA	Bacteria	alaS Spea_1196	Shewanella pealeana (strain ATCC 700345 / ANG-SQ1)	875
343	A8ICW8	SYA AZOC5	Bacteria	alaS AZC_2854	Azorhizobium caulinodans (strain ATCC 43989 / DSM 5975 / ORS 5	881
344	A8KMJ5	A8KMJ5_BURPS	Bacteria	alaS BURPSPAST_AA0314	Burkholderia pseudomallei Pasteur 52237	874
345	A8LCW4	SYA FRASN	Bacteria	alaS Franean1_1694	Frankia sp. (strain EAN1pec)	880
346	A8LL20	SYA DINSH	Bacteria	alaS Dshi_1642	Dinoroseobacter shibae (strain DFL 12)	887
347	A8LXY8	SYA SALAI	Bacteria	alaS Sare_1819	Salinispora arenicola (strain CNS-205)	892
348	A8MGI3	SYA ALKOO	Bacteria	alaS Clos_1666	Alkaliphilus oremlandii (strain OhILAs) (Clostridium oremlandii (stra	880
348	A8PPB9	A8PPB9_9COXI	Bacteria	alaS RICGR_1261	Rickettsia grylli	871
349	A8RCB2	A8RCB2_9FIRM	Bacteria	EUBDOL_01333	Eubacterium dolichum DSM 3991	874
350	A8RUG0	A8RUG0_9CLOT	Bacteria	CLOBOL_04007	Clostridium boltea ATCC BAA-613	887
350	A8S649	A8S649_9FIRM	Bacteria	FAEPRAM212_00076	Faecalibacterium prausnitzii M21/2	886
351	A8SNA4	A8SNA4_9FIRM	Bacteria	PEPMIC_01604	Parvimonas micra ATCC 33270	868
351	A8SPD7	A8SPD7_9FIRM	Bacteria	COPEUT_00259	Coprococcus euctactus ATCC 27759	887
352	A8T9C0	A8T9C0_9VIBR	Bacteria	alaS AND4_13983	Vibrio sp. AND4	865

353	A8TPL8	A8TPL8_9PROT	Bacteria	BAL199_01889	Alpha proteobacterium BAL199	889
352	A8U8E7	A8U8E7_9LACT	Bacteria	CAT7_07863	Carnobacterium sp. AT7	882
353	A8UGM1	A8UGM1_9FLAO	Bacteria	FBALC1_12872	Flavobacteriales bacterium ALC-1	870
354	A8UQV1	A8UQV1_9AQUI	Bacteria	HG1285_02558	Hydrogenivirga sp. 128-5-R1-1	873
355	A8YLG8	A8YLG8_MICAE	Bacteria	alaS IPF_2701	Microcystis aeruginosa PCC 7806	878
356	A8YTJ0	SYA_LACH4	Bacteria	alaS Lhv_0438	Lactobacillus helveticus (strain DPC 4571)	879
357	A8Z4F6	SYA_STAAT	Bacteria	alaS USA300HOU_1618	Staphylococcus aureus (strain USA300 / TCH1516)	877
358	A8ZY67	SYA_DESOH	Bacteria	alaS Dole_1268	Desulfococcus oleovorans (strain DSM 6200 / Hxd3)	876
359	A9AC16	SYA_BURM1	Bacteria	alaS Bmul_1906 BMULJ_01	Burkholderia multivorans (strain ATCC 17616 / 249)	874
360	A9B660	SYA_HERA2	Bacteria	alaS Haur_3635	Herpetosiphon aurantiacus (strain ATCC 23779 / DSM 785)	889
361	A9B9E5	SYA_PROM4	Bacteria	alaS P9211_00511	Prochlorococcus marinus (strain MIT 9211)	890
362	A9BJE0	SYA_PETMO	Bacteria	alaS Pmob_0620	Petrotoxa mobilis (strain DSM 10674 / SJ95)	876
363	A9C0B9	SYA_DELAS	Bacteria	alaS Daci_4054	Delftia acidovorans (strain DSM 14801 / SPH-1)	874
364	A9D6C7	A9D6C7_9GAMM	Bacteria	KT99_17131	Shewanella benthica KT99	874
365	A9D6E8	A9D6E8_9RHIZ	Bacteria	alaS HPDFL43_09612	Hoeflea phototrophica DFL-43	884
366	A9DQ01	A9DQ01_9FLAO	Bacteria	KAOT1_20457	Kordia algicida OT-1	870
367	A9E4G5	A9E4G5_9RHOB	Bacteria	alaS OIHLE45_12785	Oceanibulbus indolifex HEL-45	885
368	A9EMD8	A9EMD8_9RHOB	Bacteria	alaS RG210_16435	Phaeobacter gallaeciensis 2.10	883
369	A9FNH4	A9FNH4_9RHOB	Bacteria	RGBS107_14751	Phaeobacter gallaeciensis BS107	883
370	A9GSY7	A9GSY7_9RHOB	Bacteria	alaS RLO149_20819	Roseobacter litoralis Och 149	885
371	A9IK31	SYA_BORPD	Bacteria	alaS Bpet2002	Bordetella petrii (strain ATCC BAA-461 / DSM 12804 / CCUG 43448)	873
372	A9IVY8	SYA_BART1	Bacteria	alaS BT_1489	Bartonella tribocorum (strain CIP 105476 / IBS 506)	888
373	A9KB02	A9KB02_BURMA	Bacteria	alaS BMA10399_E0494	Burkholderia mallei ATCC 10399	874
374	A9KG28	SYA_COXBN	Bacteria	alaS CBUD_0990	Coxiella burnetii (strain Dugway 5J108-111)	865
375	A9KLZ5	SYA2_CLOPH	Bacteria	alaS2 Cphy_0956	Clostridium phytofermentans (strain ATCC 700394 / DSM 18823 / I	591
376	A9KMW7	SYA1_CLOPH	Bacteria	alaS1 Cphy_2617	Clostridium phytofermentans (strain ATCC 700394 / DSM 18823 / I	879
377	A9KYF8	SYA_SHEB9	Bacteria	alaS Sbal195_3267	Shewanella baltica (strain OS195)	874
378	A9M198	SYA_NEIMO	Bacteria	alaS NMCC_1505	Neisseria meningitidis serogroup C (strain 053442)	874
379	A9M5L7	SYA_BRUC2	Bacteria	alaS BCAN_A1223	Brucella canis (strain ATCC 23365 / NCTC 10854)	885
380	A9MFZ1	SYA_SALAR	Bacteria	alaS SARI_00146	Salmonella arizonae (strain ATCC BAA-731 / CDC346-86 / RSK2980	876
381	A9N0C1	SYA_SALPB	Bacteria	alaS SPAB_03515	Salmonella paratyphi B (strain ATCC BAA-1250 / SPB7)	876
382	A9NCN7	SYA_COXBR	Bacteria	alaS COXBURSA331_A0883	Coxiella burnetii (strain RSA 331 / Henzerling II)	865
383	A9NGN9	SYA_ACHLI	Bacteria	alaS ACL_0906	Acholeplasma laidlawii (strain PG-8A)	851
384	A9R0V7	SYA_YERPG	Bacteria	alaS YpAngola_A0898	Yersinia pestis bv. Antiqua (strain Angola)	875
385	A9VI09	SYA_BACWK	Bacteria	alaS BcerKBAB4_4235	Bacillus weihenstephanensis (strain KBAB4)	880
386	A9W5Y4	SYA_METEP	Bacteria	alaS Mext_2598	Methylobacterium extorquens (strain PA1)	891
387	A9WCR2	SYA_CHLAA	Bacteria	alaS Caur_3847	Chloroflexus aurantiacus (strain ATCC 29366 / DSM 635 / J-10-fl)	894
388	A9WSC4	SYA_RENSM	Bacteria	alaS RSa133209_1979	Renibacterium salmoninarum (strain ATCC 33209 / DSM 20767 / IF	896
389	A9Z5H5	A9Z5H5_YERPE	Bacteria	alaS YPIP275_4227	Yersinia pestis biovar Orientalis str. IP275	875
390	A9ZH61	A9ZH61_COXBU	Bacteria	alaS COXBURSA334_0924	Coxiella burnetii RSA 334	865
391	A9ZXV0	A9ZXV0_YERPE	Bacteria	alaS YpF1991016_2641	Yersinia pestis biovar Orientalis str. F1991016	875
392	B0AAN0	B0AAN0_9CLOT	Bacteria	CLOBAR_02185	Clostridium bartlettii DSM 16795	879
393	B0AX27	B0AX27_BACAN	Bacteria	alaS BAC_4615	Bacillus anthracis str. A0488	880
394	B0B8X5	SYA_CHLT2	Bacteria	alaS CTL0118	Chlamydia trachomatis serovar L2 (strain 434/Bu / ATCC VR-902B)	875
395	B0BAK4	SYA_CHLTB	Bacteria	alaS CTLon_0118	Chlamydia trachomatis serovar L2b (strain UCH-1/proctitis)	875
396	B0BNS8	SYA_ACTPJ	Bacteria	alaS APJL_0644	Actinobacillus pleuropneumoniae serotype 3 (strain JL03)	874
397	B0BVK9	SYA_RICRO	Bacteria	alaS RrIowa_1552	Rickettsia rickettsii (strain Iowa)	877
398	B0CFX4	SYA_ACAM1	Bacteria	alaS AM1_4444	Acaryochloris marina (strain MBIC 11017)	873
399	B0CGZ9	SYA_BRUS1	Bacteria	alaS BSUIS_A1249	Brucella suis (strain ATCC 23445 / NCTC 10510)	885
400	B0G1H3	B0G1H3_9FIRM	Bacteria	DORFOR_00092	Dorea formicigenerans ATCC 27755	893
401	B0GB35	B0GB35_YERPE	Bacteria	alaS YpUG050454_0851	Yersinia pestis biovar Antiqua str. UG05-0454	875
402	B0GVR5	B0GVR5_YERPE	Bacteria	alaS YpMG051020_1071	Yersinia pestis biovar Orientalis str. MG05-1020	875
403	B0H1A0	B0H1A0_YERPE	Bacteria	alaS YpK1973002_2339	Yersinia pestis biovar Mediaevalis str. K1973002	875
404	B0HJL8	B0HJL8_YERPE	Bacteria	alaS YpB42003004_3502	Yersinia pestis biovar Antiqua str. B42003004	875
405	B0HV92	B0HV92_YERPE	Bacteria	alaS YpE1979001_2315	Yersinia pestis biovar Antiqua str. E1979001	875
406	B0J184	SYA_MICAN	Bacteria	alaS MAE_25600	Microcystis aeruginosa (strain NIES-843)	874
407	B0K0Q1	SYA_THEPX	Bacteria	alaS Teth514_1489	Thermoanaerobacter sp. (strain X514)	877
408	B0K994	SYA_THEP3	Bacteria	alaS Teth39_1052	Thermoanaerobacter pseudethanolicus (strain ATCC 33223 / 39E) (	877
409	B0KR43	SYA_PSEPG	Bacteria	alaS PputGB1_3979	Pseudomonas putida (strain GB-1)	874
410	B0MDQ1	B0MDQ1_9FIRM	Bacteria	ANACAC_01694	Anaerostipes caccae DSM 14662	868
411	B0ML56	B0ML56_9FIRM	Bacteria	EUBSIR_00542	Eubacterium siraeum DSM 15702	878
412	B0MXJ4	B0MXJ4_9BACT	Bacteria	ALIPUT_01857	Alistipes putredinis DSM 17216	847
413	B0N6U6	B0N6U6_9FIRM	Bacteria	CLORAM_02329	Clostridium ramosum DSM 1402	869
414	B0NAH2	B0NAH2_EUBSP	Bacteria	CLOSCI_00441	Clostridium scindens ATCC 35704	879
415	B0NV37	B0NV37_BACSE	Bacteria	BACSTE_03375	Bacteroides stercoris ATCC 43183	873
416	B0P1J2	B0P1J2_9CLOT	Bacteria	CLOSS21_01816	Clostridium sp. SS2/1	868
417	B0PDV5	B0PDV5_9FIRM	Bacteria	ANACOL_02740	Anaerotruncus colihominis DSM 17241	926
418	B0Q0U2	B0Q0U2_BACAN	Bacteria	alaS BAQ_4643	Bacillus anthracis str. A0193	880
419	B0QPX7	B0QPX7_BACAN	Bacteria	alaS BAH_4669	Bacillus anthracis str. A0442	880
420	B0QT25	B0QT25_HAEPR	Bacteria	HPS_06764	Haemophilus parasuis 29755	853
421	B0REK2	SYA_CLAMS	Bacteria	alaS CMS0729	Clavibacter michiganensis subsp. sepedonicus (strain ATCC 33113 /	885
422	B0RTY1	SYA_XANCB	Bacteria	alaS xcc-b100_2535	Xanthomonas campestris pv. campestris (strain B100)	882
423	B0S104	SYA_FINM2	Bacteria	alaS FMG_0626	Fingoldia magna (strain ATCC 29328) (Peptostreptococcus magnu	873
424	B0SZN4	SYA_CAUSK	Bacteria	alaS Caul_1394	Caulobacter sp. (strain K31)	883
425	B0TFY7	SYA_HELMI	Bacteria	alaS Helmi_02400 HM1_05	Hellobacterium modesticaldum (strain ATCC 51547 / Ice1)	883
426	B0TK15	SYA_SHEHH	Bacteria	alaS Shal_1233	Shewanella halifaxensis (strain HAW-EB4)	874
427	B0TZY8	SYA_FRAP2	Bacteria	alaS Fphi_1675	Francisella philomiragia subsp. philomiragia (strain ATCC 25017)	865



428	BOU1K9	SYA_XYLFM	Bacteria	alaS_Xfasm12_0101	Xylella fastidiosa (strain M12)	884
429	BOUGC4	SYA_METS4	Bacteria	alaS_M446_5834	Methylobacterium sp. (strain 4-46)	886
430	BOUTE1	SYA_HAES2	Bacteria	alaS_HSM_1060	Haemophilus somnus (strain 2336) (Histophilus somni (strain 2336	874
431	BOVAI3	SYA_ACIBY	Bacteria	alaS_ABAYE2595	Acinetobacter baumannii (strain AYE)	878
432	BOVFU1	BOVFU1_CLOAI	Bacteria	alaS_CLOAM1696	Cloacamonas acidaminovorans	866
433	BOVL29	BOVL29_ACIBS	Bacteria	alaS_ABSDF1433	Acinetobacter baumannii (strain SDF)	878
434	B1AJ08	SYA_UREP2	Bacteria	alaS_UPA3_0385	Ureaplasma parvum serovar 3 (strain ATCC 27815 / 27 / NCTC 117	906
435	B1BAZ7	B1BAZ7_CLOBO	Bacteria	alaS_CBC_A0719	Clostridium botulinum C str. Eklund	879
436	B1BJ78	B1BJ78_CLOPE	Bacteria	alaS_CPC_2024	Clostridium perfringens C str. JGS1495	879
437	B1BXQ9	B1BXQ9_CLOPE	Bacteria	alaS_AC3_2259	Clostridium perfringens E str. JGS1987	879
438	B1C0S3	B1C0S3_9FIRM	Bacteria	CLOSPI_00802	Clostridium spiroforme DSM 1552	869
439	B1C814	B1C814_9FIRM	Bacteria	ANASTE_00871	Anaerofustus stercorihominis DSM 17244	874
440	B1EGT7	B1EGT7_9ESCH	Bacteria	alaS_ESCAB7627_1125	Escherichia albertii TW07627	876
441	B1F6I8	B1F6I8_BACAN	Bacteria	alaS_BAK_4698	Bacillus anthracis str. A0389	880
442	B1FLL1	B1FLL1_9BURK	Bacteria	BamIOP4010DRAFT_4922	Burkholderia ambifaria IOP40-10	874
443	B1G7V5	B1G7V5_9BURK	Bacteria	BgramDRAFT_5449	Burkholderia graminis C4D1M	890
444	B1GQG8	B1GQG8_BACAN	Bacteria	alaS_BAM_4677	Bacillus anthracis str. A0465	880
445	B1GZ43	SYA_UNCTG	Bacteria	alaS_TGRD_042	Uncultured termite group 1 bacterium phylotype Rs-D17	877
446	B1HI80	B1HI80_BURPS	Bacteria	alaS_BURPSS13_P0295	Burkholderia pseudomallei S13	874
447	B1HUK4	SYA_LYSSC	Bacteria	alaS_Bsph_3873	Lysinibacillus sphaericus (strain C3-41)	908
448	B1I370	SYA_DESAP	Bacteria	alaS_Daud_0912	Desulforudis audaxviator (strain MP104C)	880
449	B1ICI3	SYA_STRP1	Bacteria	alaS_SPH_1514	Streptococcus pneumoniae (strain Hungary19A-6)	872
450	B1IUG7	SYA_CLOBK	Bacteria	alaS_CLD_2001	Clostridium botulinum (strain Okra / Type B1)	879
451	B1IUY2	SYA_ECOLC	Bacteria	alaS_EcolC_1015	Escherichia coli (strain ATCC 8739 / DSM 1576 / Crooks)	876
452	B1JCG9	SYA_PSEPW	Bacteria	alaS_PputW619_3763	Pseudomonas putida (strain W619)	874
453	B1JJA0	SYA_YERP	Bacteria	alaS_YPK_3373	Yersinia pseudotuberculosis serotype O:3 (strain YPIII)	875
454	B1K026	SYA_BURCC	Bacteria	alaS_BcenmC03_1387	Burkholderia cenocepacia (strain MC0-3)	874
455	B1KPS5	SYA_SHEWM	Bacteria	alaS_Swoo_3339	Shewanella woodyi (strain ATCC 51908 / MS32)	874
456	B1KXB7	SYA_CLOMB	Bacteria	alaS_CLK_1949	Clostridium botulinum (strain Loch Maree / Type A3)	879
457	B1LBS9	SYA_THESQ	Bacteria	alaS_TRQ2_1433	Thermotoga sp. (strain RQ2)	863
458	B1LQ15	SYA_ECOSM	Bacteria	alaS_EcSMS35_2820	Escherichia coli (strain SMS-3-5 / SECEC)	876
459	B1M0N0	SYA_METRJ	Bacteria	alaS_Mrad2831_5607	Methylobacterium radiotolerans (strain ATCC 27329 / DSM 1819 / J	892
460	B1MCF9	B1MCF9_MYCA9	Bacteria	MAB_2851c	Mycobacterium abscessus (strain ATCC 19977 / DSM 44196)	891
461	B1MXP8	SYA_LEUCK	Bacteria	alaS_LCK_00467	Leuconostoc citreum (strain KM20)	894
462	B1QDX9	B1QDX9_CLOBO	Bacteria	alaS_CBN_2544	Clostridium botulinum NCTC 2916	879
463	B1QJK8	B1QJK8_CLOBO	Bacteria	alaS_CBB_2805	Clostridium botulinum Bf	879
464	B1QYT8	B1QYT8_CLOBU	Bacteria	alaS_CBY_2616	Clostridium butyricum 5521	879
465	B1RAF8	B1RAF8_CLOPE	Bacteria	alaS_AC1_2268	Clostridium perfringens B str. ATCC 3626	879
466	B1RHS9	B1RHS9_CLOPE	Bacteria	alaS_AC5_2141	Clostridium perfringens CPE str. F4969	879
467	B1RTJ5	B1RTJ5_CLOPE	Bacteria	alaS_AC7_2035	Clostridium perfringens NCTC 8239	879
468	B1RVD5	B1RVD5_UREPA	Bacteria	alaS_UPA14_G0258	Ureaplasma parvum serovar 14 str. ATCC 33697	906
469	B1RWS0	B1RWS0_UREPA	Bacteria	alaS_UPA1_G0612	Ureaplasma parvum serovar 1 str. ATCC 27813	906
470	B1RYL7	B1RYL7_UREUR	Bacteria	alaS_UUR13_0177	Ureaplasma urealyticum serovar 13 str. ATCC 33698	906
471	B1S3J1	B1S3J1_STRPN	Bacteria	alaS_SP187300_1476	Streptococcus pneumoniae CDC1873-00	872
472	B1SB55	B1SB55_9BIFI	Bacteria	BIFDEN_02192	Bifidobacterium dentium ATCC 27678	892
473	B1SFF1	B1SFF1_9STRE	Bacteria	STRINF_01416	Streptococcus infantarius subsp. infantarius ATCC BAA-102	872
474	B1TDA3	B1TDA3_9BURK	Bacteria	BamMEX5DRAFT_5769	Burkholderia ambifaria MEX-5	874
475	B1UTJ4	B1UTJ4_BACAN	Bacteria	alaS_BAO_4599	Bacillus anthracis str. A0174	880
476	B1V3M8	B1V3M8_CLOPE	Bacteria	alaS_CJD_2357	Clostridium perfringens D str. JGS1721	879
477	B1VA70	B1VA70_PHYAS	Bacteria	alaS_PA0509	Phytolasma australiense	863
478	B1VDL4	SYA_CORU7	Bacteria	alaS_cu0952	Corynebacterium urealyticum (strain ATCC 43042 / DSM 7109)	888
479	B1W3I1	SYA_STRGG	Bacteria	alaS_SGR_6034	Streptomyces griseus subsp. griseus (strain JCM 4626 / NBRC 1335	889
480	B1WYQ5	SYA_CYAA5	Bacteria	alaS_ccc_1722	Cyanothece sp. (strain ATCC 51142)	879
481	B1XCM5	SYA_ECODH	Bacteria	alaS_ECDH10B_2865	Escherichia coli (strain K12 / DH10B)	876
482	B1XP68	SYA_SYNP2	Bacteria	alaS_SYNPCC7002_A1672	Synechococcus sp. (strain ATCC 27264 / PCC 7002 / PR-6) (Agmen	877
483	B1XW08	B1XW08_POLNS	Bacteria	Pnec_1437	Polynucleobacter necessarius (strain STIR1)	874
484	B1Y1G9	SYA_LEPCP	Bacteria	alaS_Lcho_2001	Leptothrix cholodnii (strain ATCC 51168 / LMG 8142 / SP-6) (Lepto	875
485	B1YJE5	SYA_EXIS2	Bacteria	alaS_Exig_2074	Exiguobacterium sibiricum (strain DSM 17290 / JCM 13490 / 255-1	880
486	B1YNJ6	SYA_BURA4	Bacteria	alaS_BamMC406_1324	Burkholderia ambifaria (strain MC40-6)	874
487	B1ZC90	SYA_METPB	Bacteria	alaS_Mpop_2626	Methylobacterium populi (strain ATCC BAA-705 / NCIMB 13946 / B.	891
488	B1ZZ40	SYA_OPITP	Bacteria	alaS_Oter_3838	Opitutus terrae (strain DSM 11246 / PB90-1)	937
489	B2A5J7	SYA_NATTJ	Bacteria	alaS_Nther_1780	Natranaerobius thermophilus (strain ATCC BAA-1301 / DSM 18059	878
490	B2D8X1	B2D8X1_UREPA	Bacteria	alaS_UPA6_A0374	Ureaplasma parvum serovar 6 str. ATCC 27818	906
491	B2DAB4	B2DAB4_UREUR	Bacteria	alaS_UUR5_E0030	Ureaplasma urealyticum serovar 5 str. ATCC 27817	906
492	B2DKF6	B2DKF6_STRPN	Bacteria	alaS_SP108700_1403	Streptococcus pneumoniae CDC1087-00	872
493	B2DPP2	B2DPP2_STRPN	Bacteria	alaS_SP195_1321	Streptococcus pneumoniae SP195	872
494	B2DT62	B2DT62_STRPN	Bacteria	alaS_SP28804_1246	Streptococcus pneumoniae CDC0288-04	872
495	B2DYC5	B2DYC5_STRPN	Bacteria	alaS_SP305906_1321	Streptococcus pneumoniae CDC3059-06	872
496	B2E4S0	B2E4S0_STRPN	Bacteria	alaS_SPLMV016_1289	Streptococcus pneumoniae MLV-016	872
497	B2E8P2	B2E8P2_BIFAN	Bacteria	BIFLAC_02727	Bifidobacterium animalis subsp. lactis HN019	899
498	B2FL33	SYA_STRMK	Bacteria	alaS_Smlt1743	Stenotrophomonas maltophilia (strain K279a)	882
499	B2G6F3	B2G6F3_LACRJ	Bacteria	LAR_0519	Lactobacillus reuteri (strain JCM 1112)	885
500	B2GB25	B2GB25_LACF3	Bacteria	LAF_0521	Lactobacillus fermentum (strain IFO 3956 / LMG 18251)	882
501	B2GIA1	SYA_KOCDR	Bacteria	alaS_KRH_13460	Kocuria rhizophila (strain ATCC 9341 / DSM 348 / NBRC 103217 / L	895
502	B2GW07	B2GW07_BURPS	Bacteria	alaS_BURPS1655_A2121	Burkholderia pseudomallei 1655	874
503	B2HNC1	SYA_MYCMM	Bacteria	alaS_MMAR_2170	Mycobacterium marinum (strain ATCC BAA-535 / M)	901
504	B2HWK7	SYA_ACIBC	Bacteria	alaS_ACICU_01154	Acinetobacter baumannii (strain ACICU)	878

505	B2I6K2	SYA_XYLF2	Bacteria	alaS XfasM23_0087	Xylella fastidiosa (strain M23)	884
506	B2IHX3	SYA_BEI19	Bacteria	alaS Bind_2405	Beijerinckia indica subsp. indica (strain ATCC 9039 / DSM 1715 / N	898
506	B2IQK0	SYA_STRPS	Bacteria	alaS SPCG_1372	Streptococcus pneumoniae (strain CGSP14)	872
507	B2J876	SYA_NOSP7	Bacteria	alaS Npun_F0562	Nostoc punctiforme (strain ATCC 29133 / PCC 73102)	880
508	B2JK72	SYA_BURP8	Bacteria	alaS Bphyt_1613	Burkholderia phymatum (strain DSM 17167 / STM815)	874
509	B2K5X9	SYA_YERPB	Bacteria	alaS YPTS_0861	Yersinia pseudotuberculosis serotype IB (strain PB1/+)	875
510	B2N1I2	B2N1I2_ECOLX	Bacteria	alaS Ec53638_3241	Escherichia coli 53638	876
511	B2NEY8	B2NEY8_UREUR	Bacteria	alaS UUR7_0385	Ureaplasma urealyticum serovar 7 str. ATCC 27819	906
512	B2NGS7	B2NGS7_UREUR	Bacteria	alaS UUR11_0378	Ureaplasma urealyticum serovar 11 str. ATCC 33695	906
513	B2NRL1	B2NRL1_ECO57	Bacteria	alaS ECH7EC4196_1341	Escherichia coli O157:H7 str. EC4196	876
514	B2P7I1	B2P7I1_ECO57	Bacteria	alaS ECH7EC4113_0244	Escherichia coli O157:H7 str. EC4113	876
515	B2PF71	B2PF71_ECO57	Bacteria	alaS ECH7EC4076_2889	Escherichia coli O157:H7 str. EC4076	876
516	B2PTZ3	B2PTZ3_PROST	Bacteria	PROSTU_00005	Providencia stuartii ATCC 25827	876
517	B2RKK5	B2RKK5_PORG3	Bacteria	PGN_1381	Porphyromonas gingivalis (strain ATCC 33277 / DSM 20709 / JCM 1	876
518	B2RZT0	SYA_BORHD	Bacteria	alaS BH0220	Borrelia hermsii (strain DAH)	593
519	B2S4Q4	B2S4Q4_TREPS	Bacteria	alaS TPASS_1017	Treponema pallidum subsp. pallidum (strain SS14)	605
520	B2S647	B2S647_BRUA1	Bacteria	BABs19_I11390	Brucella abortus (strain S19)	885
521	B2SH99	SYA_FRATM	Bacteria	alaS FTM_1240	Francisella tularensis subsp. mediasiatica (strain FSC147)	865
522	B2SUD0	SYA_XANOP	Bacteria	alaS PXO_00147	Xanthomonas oryzae pv. oryzae (strain PXO99A)	882
523	B2SZN0	SYA_BURPP	Bacteria	alaS Bphyt_2824	Burkholderia phytofirmans (strain DSM 17436 / PsJN)	874
524	B2THN0	SYA_CLOBB	Bacteria	alaS CLL_A1174	Clostridium botulinum (strain Eklund 17B / Type B)	879
525	B2U049	SYA_SHIB3	Bacteria	alaS SbBS512_E3180	Shigella boydii serotype 18 (strain CDC 3083-94 / BS512)	876
526	B2U853	B2U853_RALPJ	Bacteria	Rpic_0744	Ralstonia pickettii (strain 12J)	888
527	B2UKT4	SYA_AKKM8	Bacteria	alaS Amuc_1383	Akkermansia muciniphila (strain ATCC BAA-835)	942
528	B2V3W2	SYA_CLOBA	Bacteria	alaS CLH_1125	Clostridium botulinum (strain Alaska E43 / Type E3)	879
529	B2V709	SYA_SULSY	Bacteria	alaS SYO3AOP1_0146	Sulfurihydrogenibium sp. (strain YO3AOP1)	876
530	B2VHD4	B2VHD4_ERWT9	Bacteria	alaS ETA_26660	Erwinia tasmaniensis (strain DSM 17950 / Et1/99)	875
531	B3A6T6	B3A6T6_ECO57	Bacteria	alaS ECH7EC4401_0401	Escherichia coli O157:H7 str. EC4401	876
531	B3ANG7	B3ANG7_ECO57	Bacteria	alaS ECH7EC4486_2601	Escherichia coli O157:H7 str. EC4486	876
532	B3B4W5	B3B4W5_ECO57	Bacteria	alaS ECH7EC4501_6002	Escherichia coli O157:H7 str. EC4501	876
533	B3BJ78	B3BJ78_ECO57	Bacteria	alaS ECH7EC869_3899	Escherichia coli O157:H7 str. EC869	876
534	B3BYJ5	B3BYJ5_ECO57	Bacteria	alaS ECH7EC508_4816	Escherichia coli O157:H7 str. EC508	876
535	B3CGP4	B3CGP4_9BACE	Bacteria	BACINT_04561	Bacteroides intestinalis DSM 17393	872
536	B3CLK7	B3CLK7_WOLPP	Bacteria	alaS WP0667	Wolbachia pipientis subsp. Culex pipiens (strain wPip)	860
537	B3CST3	SYA_ORITI	Bacteria	alaS OTT_0972	Orientia tsutsugamushi (strain Ikeda) (Rickettsia tsutsugamushi)	889
538	B3DSE3	B3DSE3_BIFLD	Bacteria	alaS BLD_0616	Bifidobacterium longum (strain DJO10A)	893
539	B3E044	SYA_METI4	Bacteria	alaS Minf_0650	Methylacidiphilum infernorum (isolate V4) (Methylokorus infernorur	926
540	B3E9Y5	B3E9Y5_GEOLS	Bacteria	Glov_3154	Geobacter lovleyi (strain ATCC BAA-1151 / DSM 17278 / SZ)	876
541	B3EES2	B3EES2_CHLL2	Bacteria	Clim_0206	Chlorobium limicola (strain DSM 245 / NBRC 103803)	888
542	B3EL72	B3EL72_CHLPB	Bacteria	Cphamm1_0330	Chlorobium phaeobacteroides (strain BS1)	886
543	B3ERX7	B3ERX7_AMOAS	Bacteria	Aasi_0578	Amoebophilus asiaticus (strain 5a2)	879
544	B3H177	SYA_ACTP7	Bacteria	alaS APP7_0694	Actinobacillus pleuropneumoniae serotype 7 (strain AP76)	874
545	B3HDP3	B3HDP3_ECOLX	Bacteria	alaS EcB7A_3192	Escherichia coli B7A	876
546	B3HQ27	B3HQ27_ECOLX	Bacteria	alaS EcF11_3097	Escherichia coli F11	876
547	B3I8V2	B3I8V2_ECOLX	Bacteria	alaS EcE22_0350	Escherichia coli E22	876
548	B3ILR8	B3ILR8_ECOLX	Bacteria	alaS EcE110019_0922	Escherichia coli E110019	876
548	B3J630	B3J630_BACAN	Bacteria	alaS BATI_4454	Bacillus anthracis Tsiankovskii-I	880
549	B3JPF2	B3JPF2_9BACE	Bacteria	BACCOP_03913	Bacteroides coprocola DSM 17136	872
550	B3PCZ6	B3PCZ6_CELJU	Bacteria	alaS CJA_1359	Cellvibrio japonicus (strain Ueda107) (Pseudomonas fluorescens su	875
551	B3PM69	B3PM69_MYCA5	Bacteria	alaS MARTH_orf202	Mycoplasma arthritidis (strain 158L3-1)	885
552	B3PPU3	B3PPU3_RHIE6	Bacteria	alaS2_RHECIAT_CH000241	Rhizobium etli (strain CIAT 652)	884
553	B3QI68	B3QI68_RHOPT	Bacteria	Rpal_4372	Rhodopseudomonas palustris (strain TIE-1)	889
554	B3QQR2	B3QQR2_CHLP8	Bacteria	Cpar_1873	Chlorobaculum parvum (strain NCIB 8327) (Chlorobium vibrioform	885
555	B3QVB1	B3QVB1_CHLT3	Bacteria	Ctha_0595	Chloroherpeton thalassium (strain ATCC 35110 / GB-78)	887
556	B3QZP8	B3QZP8_PHYMT	Bacteria	alaS ATP_00248	Phytoplasma mali (strain AT)	861
557	B3R5H0	B3R5H0_CUPTR	Bacteria	alaS RALTA_A2261	Cupriavidus taiwanensis (strain R1 / LMG 19424) (Ralstonia taiwan	874
558	B3WC68	B3WC68_LACCB	Bacteria	alaS LCABL_08460	Lactobacillus casei (strain BL23)	881
559	B3WLW8	B3WLW8_ECOLX	Bacteria	alaS EcB171_0400	Escherichia coli B171	876
560	B3X0Z5	B3X0Z5_SHIDY	Bacteria	alaS Sd1012_2461	Shigella dysenteriae 1012	876
561	B3XHH7	B3XHH7_ECOLX	Bacteria	alaS EC1011_1707	Escherichia coli 101-1	876
562	B3XRD2	B3XRD2_LACRE	Bacteria	Lreu23DRAFT_3594	Lactobacillus reuteri 100-23	884
563	B3XTJ0	B3XTJ0_UREUR	Bacteria	alaS UUR9_0614	Ureaplasma urealyticum serovar 9 str. ATCC 33175	906
564	B3XVQ0	B3XVQ0_UREUR	Bacteria	alaS UUR12_A0380	Ureaplasma urealyticum serovar 12 str. ATCC 33696	906
565	B3YID2	B3YID2_SALET	Bacteria	alaS SeKA_A2338	Salmonella enterica subsp. enterica serovar Kentucky str. CVM2918	876
566	B3YUF3	B3YUF3_BACCE	Bacteria	alaS BCW_4289	Bacillus cereus V	880
567	B3Z821	B3Z821_BACCE	Bacteria	alaS BC059799_4466	Bacillus cereus NVH0597-99	880
568	B3ZP03	B3ZP03_BACCE	Bacteria	alaS BC03BB108_4307	Bacillus cereus 03BB108	880
569	B4A2F8	B4A2F8_SALNE	Bacteria	alaS SNSL317_A4212	Salmonella enterica subsp. enterica serovar Newport str. SL317	876
570	B4ALT8	B4ALT8_BACPU	Bacteria	alaS BAT_1561	Bacillus pumilus ATCC 7061	878
571	B4ATK9	B4ATK9_FRANO	Bacteria	alaS FTE_1021	Francisella novicida FTE	865
572	B4BQ41	B4BQ41_9BACI	Bacteria	G11MC16DRAFT_2530	Geobacillus sp. G11MC16	878
573	B4D2L0	B4D2L0_9BACT	Bacteria	CfE428DRAFT_3135	Chthoniobacter flavus Ellin428	925
574	B4E6Y2	B4E6Y2_BURCJ	Bacteria	alaS BceJ2315_13830_BCA	Burkholderia cepacia (strain J2315 / LMG 16656) (Burkholderia cen	874
575	B4EUV7	B4EUV7_PROMH	Bacteria	alaS PMI0376	Proteus mirabilis (strain HI4320)	875
576	B4RHE1	B4RHE1_PHEZH	Bacteria	alaS PHZ_c0987	Phenylobacterium zucineum (strain HLK1)	880
577	B4RIZ0	B4RIZ0_NEIG2	Bacteria	NGK_0251	Neisseria gonorrhoeae (strain NCCP11945)	874
578	B4RUJ6	B4RUJ6_ALTMD	Bacteria	MADE_02846	Alteromonas macleodii (strain DSM 17117 / Deep ecotype)	865



579	B4S4B1	B4S4B1 PROA2	Bacteria	Paes_0302	Prosthecochloris aestuarii (strain DSM 271 / SK 413)	885
580	B4SG00	B4SG00 PELPB	Bacteria	Ppha_2668	Pelodictyon phaeoclathratiforme (strain DSM 5477 / BU-1)	888
581	B4SRB2	B4SRB2 STRM5	Bacteria	Smal_1478	Stenotrophomonas maltophilia (strain R551-3)	882
582	B4T398	B4T398 SALNS	Bacteria	alaS SNSL254_A3029	Salmonella newport (strain SL254)	876
583	B4TF11	B4TF11 SALHS	Bacteria	alaS SeHA_C3013	Salmonella heidelberg (strain SL476)	876
584	B4TT04	B4TT04 SALSV	Bacteria	alaS SeSA_A2978	Salmonella schwarzengrund (strain CVM19633)	876
585	B4U215	B4U215 STREM	Bacteria	alaS Sez_0667	Streptococcus equi subsp. zooepidemicus (strain MGCS10565)	872
586	B4U683	B4U683 HYDS0	Bacteria	HY04AAS1_1536	Hydrogenobaculum sp. (strain Y04AAS1)	856
587	B4UET3	B4UET3 ANASK	Bacteria	AnaeK_3839	Anaeromyxobacter sp. (strain K)	905
588	B4V668	B4V668_9ACTO	Bacteria	SSAG_03246	Streptomyces sp. Mg1	889
589	B4VYK7	B4VYK7_9CYAN	Bacteria	MC7420_2633	Microcoleus chthonoplastes PCC 7420	877
590	B4WFB2	B4WFB2_9CAUL	Bacteria	BBAL3_723	Brevundimonas sp. BAL3	882
591	B4WG64	B4WG64_9SYNE	Bacteria	S7335_5240	Synechococcus sp. PCC 7335	887
592	B4X4W0	B4X4W0_9GAMM	Bacteria	ADG881_1141	Alcanivorax sp. DG881	866
593	B5BEN5	B5BEN5_SALPK	Bacteria	SSPA2499	Salmonella paratyphi A (strain AKU_12601)	876
594	B5BNH1	B5BNH1_UREUR	Bacteria	alaS UUR4_0548	Ureaplasma urealyticum serovar 4 str. ATCC 27816	906
595	B5BYR1	B5BYR1_SALET	Bacteria	alaS SeSPA_A3382	Salmonella enterica subsp. enterica serovar Saintpaul str. SARA23	876
596	B5CBG6	B5CBG6_SALET	Bacteria	alaS SeSB_A3145	Salmonella enterica subsp. enterica serovar Schwarzengrund str. SI	876
597	B5CM23	B5CM23_9FIRM	Bacteria	RUMLAC_00497	Ruminococcus lactaris ATCC 29176	879
598	B5D2F9	B5D2F9_9BACE	Bacteria	BACPLE_03162	Bacteroides plebeius DSM 17135	872
599	B5E5P0	B5E5P0_STRP4	Bacteria	alaS SPG_1323	Streptococcus pneumoniae serotype 19F (strain G54)	872
600	B5ED08	B5ED08_GEOBB	Bacteria	Gbem_3633	Geobacter bemidiensis (strain Bem / ATCC BAA-1014 / DSM 16622)	875
601	B5EQ49	B5EQ49_ACIF5	Bacteria	Lferr_1052	Acidithiobacillus ferrooxidans (strain ATCC 53993) (Leptospirillum f)	877
602	B5F350	B5F350_SALA4	Bacteria	alaS SeAg_B2946	Salmonella agona (strain SL483)	876
603	B5FAD1	B5FAD1_VIBFM	Bacteria	alaS VFJM11_0539	Vibrio fischeri (strain MJ11)	859
604	B5FSX8	B5FSX8_SALDC	Bacteria	alaS SeD_A3136	Salmonella dublin (strain CT_02021853)	876
605	B5GBH3	B5GBH3_9ACTO	Bacteria	SSBG_01659	Streptomyces sp. SPB74	866
606	B5GWY8	B5GWY8_STRCL	Bacteria	SSCG_03792	Streptomyces clavuligerus ATCC 27064	869
607	B5HGS9	B5HGS9_STRPR	Bacteria	SSDG_04363	Streptomyces pristinaespiralis ATCC 25486	854
608	B5I019	B5I019_9ACTO	Bacteria	SSEG_09621	Streptomyces svicensis ATCC 29083	890
609	B5I150	B5I150_9CHRO	Bacteria	alaS CPCC7001_284	Cyanobium sp. PCC 7001	907
610	B5IXK7	B5IXK7_9RHOB	Bacteria	OA307_1828	Octadecabacter antarcticus 307	884
611	B5JGJ0	B5JGJ0_9BACT	Bacteria	VDG1235_4053	Verrucomicrobiae bacterium DG1235	883
612	B5JV98	B5JV98_9GAMM	Bacteria	alaS GP5015_357	Gamma proteobacterium HTCC5015	868
613	B5JZH4	B5JZH4_9RHOB	Bacteria	alaS OA238_1319	Octadecabacter antarcticus 238	884
614	B5MKA3	B5MKA3_SALET	Bacteria	alaS SeSPB_A2998	Salmonella enterica subsp. enterica serovar Saintpaul str. SARA29	876
614	B5NBF7	B5NBF7_SALET	Bacteria	alaS SeJ_A3270	Salmonella enterica subsp. enterica serovar Javiana str. GA_MM04C	876
615	B5NNK2	B5NNK2_SALET	Bacteria	alaS SeKB_A2951	Salmonella enterica subsp. enterica serovar Kentucky str. CDC 191	876
616	B5PA04	B5PA04_SALET	Bacteria	alaS SeHB_A2916	Salmonella enterica subsp. enterica serovar Heidelberg str. SL486	876
617	B5PGW1	B5PGW1_SALET	Bacteria	alaS SeW_A3239	Salmonella enterica subsp. enterica serovar Weltevreden str. HI_NC	876
616	B5PUL2	B5PUL2_SALHA	Bacteria	alaS SeH_A3224	Salmonella enterica subsp. enterica serovar Hadar str. RI_05P066	876
617	B5Q848	B5Q848_SALVI	Bacteria	alaS SeV_B2286	Salmonella enterica subsp. enterica serovar Virchow str. SL491	876
618	B5QMN1	B5QMN1_LACRH	Bacteria	LRH_00257	Lactobacillus rhamnosus HN001	881
618	B5QV76	B5QV76_SALEP	Bacteria	alaS SEN2668	Salmonella enteritidis PT4 (strain P125109)	876
619	B5RDF2	B5RDF2_SALG2	Bacteria	alaS SG2730	Salmonella gallinarum (strain 287/91 / NCTC 13346)	876
620	B5RL45	B5RL45_BORLD	Bacteria	alaS BDU_221	Borrelia duttonii (strain Ly)	592
619	B5RR38	B5RR38_BORRA	Bacteria	alaS BRE_220	Borrelia recurrentis (strain A1)	592
620	B5S9E7	B5S9E7_RALSO	Bacteria	alaS RSMK04508	Ralstonia solanacearum (Pseudomonas solanacearum)	893
621	B5SGG1	B5SGG1_RALSO	Bacteria	alaS RSIPO_02199	Ralstonia solanacearum IPO1609	825
622	B5UMV7	B5UMV7_BACCE	Bacteria	alaS BCAH1134_4491	Bacillus cereus AH1134	880
623	B5V6D1	B5V6D1_BACCE	Bacteria	alaS BCH308197_4379	Bacillus cereus H3081.97	880
624	B5VWU3	B5VWU3_SPIMA	Bacteria	AmaxDRAFT_0985	Arthrospira maxima CS-328	876
625	B5WNB0	B5WNB0_9BURK	Bacteria	BH160DRAFT_4563	Burkholderia sp. H160	874
626	B5XM38	B5XM38_STRPZ	Bacteria	alaS Spy49_1108c	Streptococcus pyogenes serotype M49 (strain NZ131)	872
627	B5XVB8	B5XVB8_KLEP3	Bacteria	alaS KPK_1098	Klebsiella pneumoniae (strain 342)	875
628	B5Y7R1	B5Y7R1_COPPD	Bacteria	alaS COPRO5265_0443	Coprothermobacter proteolyticus (strain ATCC 35245 / DSM 5265 /	876
629	B5YDY5	B5YDY5_DICT6	Bacteria	alaS DICTH_0880	Dictyoglomus thermophilum (strain ATCC 35947 / DSM 3960 / H-6-	866
630	B5YJG4	B5YJG4_THEYD	Bacteria	alaS THEYE_A0536	Thermodesulfobacillus yellowstonii (strain ATCC 51303 / DSM 11347)	875
631	B5Z2A8	B5Z2A8_ECO5E	Bacteria	alaS ECH74115_3944	Escherichia coli O157:H7 (strain EC4115 / EHEC)	876
632	B5ZB11	B5ZB11_UREU1	Bacteria	alaS UUR10_0378	Ureaplasma urealyticum serovar 10 (strain ATCC 33699 / Western)	906
633	B5ZRG1	B5ZRG1_RHLIW	Bacteria	Rleg2_1957	Rhizobium leguminosarum bv. trifolii (strain WSM2304)	884
634	B6ANE9	B6ANE9_9BACT	Bacteria	CGL2_10933004	Leptospirillum sp. Group II '5-way CG'	891
635	B6AYP5	B6AYP5_9RHOB	Bacteria	alaS RB2083_1533	Rhodobacteraceae bacterium HTCC2083	887
636	B6BE27	B6BE27_9RHOB	Bacteria	alaS RBY4I_1692	Rhodobacteriales bacterium Y4I	883
637	B6BHU3	B6BHU3_9PROT	Bacteria	alaS CBGD1_773	Campylobacteriales bacterium GD 1	849
638	B6BSI7	B6BSI7_9RICK	Bacteria	alaS PB7211_272	Candidatus Pelagibacter sp. HTCC7211	888
639	B6BWK2	B6BWK2_9PROT	Bacteria	alaS KB13_1289	Beta proteobacterium KB13	873
640	B6BZW4	B6BZW4_9GAMM	Bacteria	NOC27_889	Nitrosococcus oceani AFC27	873
641	B6ENH9	B6ENH9_ALISL	Bacteria	alaS VSAL_I0635	Aliivibrio salmonicida (strain LFI1238) (Vibrio salmonicida (strain LF	860
642	B6FS40	B6FS40_9CLOT	Bacteria	CLONEX_02964	Clostridium nexile DSM 1787	885
643	B6FZ95	B6FZ95_9CLOT	Bacteria	CLOHIR_01199	Clostridium hiranonis DSM 13275	911
644	B6GCI2	B6GCI2_9ACTN	Bacteria	COLSTE_01805	Collinsella stercoris DSM 13279	884
645	B6I683	B6I683_ECO5E	Bacteria	ECSE_2945	Escherichia coli (strain SE11)	876
646	B6IS94	B6IS94_RHOCS	Bacteria	alaS RC1_0900	Rhodospirillum centenum (strain ATCC 51521 / SW)	898
647	B6J044	B6J044_COXB2	Bacteria	alaS CbuG_0952	Coxiella burnetii (strain CbuG_Q212) (Coxiella burnetii (strain Q212	865
648	B6J6Y9	B6J6Y9_COXB1	Bacteria	alaS CbuK_0786	Coxiella burnetii (strain CbuK_Q154) (Coxiella burnetii (strain Q154	865
649	B6JBM6	B6JBM6_OLICO	Bacteria	alaS OCAR_5435	Oligotropha carboxidovorans (strain ATCC 49405 / DSM 1227 / OM	909

650	B6R0D6	B6R0D6_9RHOB	Bacteria	PJE062_4618	Pseudovibrio sp. JE062	551
651	B6W0H4	B6W0H4_9BACE	Bacteria	BACDOR_03157	Bacteroides dorei DSM 17855	872
652	B6W831	B6W831_9FIRM	Bacteria	ANHYDRO_00730	Anaerococcus hydrogenalis DSM 7454	867
653	B6WXJ6	B6WXJ6_9DELTA	Bacteria	DESPIG_02823	Desulfovibrio piger ATCC 29098	889
654	B6XAT2	B6XAT2_9ENTR	Bacteria	PROVALCAL_00430	Providencia alcalifaciens DSM 30120	875
655	B6XV65	B6XV65_9BIFI	Bacteria	BIFCAT_00972	Bifidobacterium catenulatum DSM 16992	892
656	B6Y943	B6Y943_9RICK	Bacteria	alaS_C1A_246	Wolbachia endosymbiont of Culex quinquefasciatus JHB	860
657	B6YRF8	B6YRF8_AZOPC	Bacteria	CFPG_517	Azobacteroides pseudotrichonymphae genomovar. CFP2	872
658	B6ZWC5	B6ZWC5_ECO57	Bacteria	alaS_ESCCO14588_5251	Escherichia coli O157:H7 str. TW14588	876
659	B7A622	B7A622_THEAQ	Bacteria	TaqDRAFT_4891	Thermus aquaticus Y51MC23	881
660	B7AEH7	B7AEH7_9BACE	Bacteria	BACEGG_00798	Bacteroides eggerthii DSM 20697	873
661	B7ANV3	B7ANV3_9BACE	Bacteria	BACPEC_00357	Bacteroides pectinophilus ATCC 43243	868
662	B7B568	B7B568_9PORP	Bacteria	PRABACTJOHN_00161	Parabacteroides johnsonii DSM 18315	875
663	B7C7P0	B7C7P0_9FIRM	Bacteria	EUBIFOR_00188	Eubacterium bifforme DSM 3989	876
664	B7CU68	B7CU68_BURPS	Bacteria	alaS_BUC_2496	Burkholderia pseudomallei 576	874
665	B7GIT2	B7GIT2_ANOFW	Bacteria	alaS_Aflv_0744	Anoxybacillus flavithermus (strain DSM 21510 / WK1)	877
666	B7GSA1	B7GSA1_BIFLS	Bacteria	Blon_1602	Bifidobacterium longum subsp. infantis (strain ATCC 15697 / DSM 2)	892
667	B7GWX4	B7GWX4_ACIB3	Bacteria	alaS_ABBFA_002403	Acinetobacter baumannii (strain AB307-0294)	883
668	B7HE23	B7HE23_BACC4	Bacteria	alaS_BCB4264_A4508	Bacillus cereus (strain B4264)	880
669	B7HQE6	B7HQE6_BACC7	Bacteria	alaS_BCAH187_A4521	Bacillus cereus (strain AH187)	880
670	B7IAF1	B7IAF1_ACIB5	Bacteria	alaS_AB57_1311	Acinetobacter baumannii (strain AB0057)	883
671	B7IDI3	B7IDI3_THEAB	Bacteria	alaS_THA_1622	Thermosiphon africanus (strain TCF52B)	859
672	B7IYP2	B7IYP2_BACC2	Bacteria	alaS_BCG9842_B0728	Bacillus cereus (strain G9842)	880
673	B7J1F0	B7J1F0_BORBZ	Bacteria	BbuZS7_0225	Borrelia burgdorferi (strain ZS7)	594
674	B7J7B1	B7J7B1_ACIF2	Bacteria	alaS_AFE_0934	Acidithiobacillus ferrooxidans (strain ATCC 23270 / DSM 14882 / NCIMB 13688)	877
675	B7JPX4	B7JPX4_BACC0	Bacteria	alaS_BCAH820_4468	Bacillus cereus (strain AH820)	880
676	B7K4L5	B7K4L5_CYAP8	Bacteria	PCC8801_1423	Cyanospora sp. (strain PCC 8801) (Synechococcus sp. (strain PCC 8801))	879
677	B7KIE8	B7KIE8_CYAP7	Bacteria	PCC7424_0898	Cyanospora sp. (strain PCC 7424) (Synechococcus sp. (strain ATCC 8774))	881
678	B7KPS4	B7KPS4_METC4	Bacteria	Mchl_2821	Methylobacterium chloromethanicum (strain CM4 / NCIMB 13688)	891
679	B7LEA8	B7LEA8_ECO55	Bacteria	alaS_EC55989_2959	Escherichia coli (strain 55989 / EAEC)	876
680	B7LW32	B7LW32_ESCF3	Bacteria	alaS_EFER_0377	Escherichia fergusonii (strain ATCC 35469 / DSM 13698 / CDC 0568)	876
681	B7M9D4	B7M9D4_ECO8A	Bacteria	alaS_ECIA11_2788	Escherichia coli O8 (strain IAI1)	876
682	B7MKG6	B7MKG6_ECO45	Bacteria	alaS_ECS88_2960	Escherichia coli O45:K1 (strain S88 / ExPEC)	876
683	B7MYZ4	B7MYZ4_ECO81	Bacteria	alaS_ECED1_3146	Escherichia coli O81 (strain ED1a)	876
684	B7N6S7	B7N6S7_EC0L0	Bacteria	alaS_ECUMN_3018	Escherichia coli O17:K52:H18 (strain UMN026 / ExPEC)	876
685	B7NSH7	B7NSH7_ECO7I	Bacteria	alaS_ECIAI39_2882	Escherichia coli O7:K1 (strain IAI39 / ExPEC)	876
686	B7QSR9	B7QSR9_9RHOB	Bacteria	alaS_RR11_450	Ruegeria sp. R11	883
687	B7RH73	B7RH73_9RHOB	Bacteria	alaS_RGAI101_2151	Roseobacter sp. GAI101	885
688	B7RTN8	B7RTN8_9GAMM	Bacteria	alaS_GPB2148_3150	Marine gamma proteobacterium HTCC2148	866
689	B7UHB5	B7UHB5_ECO27	Bacteria	alaS_E2348_C_2960_E2348	Escherichia coli O127:H6 (strain E2348/69 / EPEC)	876
690	B7UY31	B7UY31_PSEA8	Bacteria	alaS_PLES_44131	Pseudomonas aeruginosa (strain LESB58)	874
691	B7VK44	B7VK44_VIBSL	Bacteria	VS_2583	Vibrio splendidus (strain LGP32) (Vibrio splendidus (strain Mel32))	860
692	B7WSG5	B7WSG5_COMTE	Bacteria	CtesDRAFT_PD2205	Comamonas testosteroni KF-1	874
693	B7XSP2	B7XSP2_BORGA	Bacteria	BGAPBR_0224	Borrelia garinii PBr	594
694	B7XVY0	B7XVY0_BORGA	Bacteria	BGAFAR04_0227	Borrelia garinii Far04	594
695	B8CJQ7	B8CJQ7_SHEPW	Bacteria	swp_1367	Shewanella piezotolerans (strain WP3 / JCM 13877)	874
696	B8D2A5	B8D2A5_HALOH	Bacteria	Hore_05750	Halothermothrix orenii (strain H 168 / OCM 544 / DSM 9562)	876
697	B8D7T8	B8D7T8_BUCAT	Bacteria	alaS_BUAPTUC7_397	Buchnera aphidicola subsp. Acyrthosiphon pisum (strain Tuc7)	878
698	B8D9I6	B8D9I6_BUCA5	Bacteria	alaS_BUAP5A_396	Buchnera aphidicola subsp. Acyrthosiphon pisum (strain 5A)	878
699	B8DE06	B8DE06_LISMH	Bacteria	alaS_LMHCC_1065	Listeria monocytogenes serotype 4a (strain HCC23)	879
700	B8DP01	B8DP01_DESVM	Bacteria	DvMF_0877	Desulfovibrio vulgaris (strain Miyazaki F / DSM 19637)	879
701	B8E226	B8E226_DICTD	Bacteria	Dtur_1023	Dictyoglomus turgidum (strain Z-1310 / DSM 6724)	865
702	B8E8U4	B8E8U4_SHEB2	Bacteria	Sbal223_1250	Shewanella baltica (strain OS223)	874
703	B8ETRO	B8ETRO_METSB	Bacteria	Msil_3523	Methylocella silvestris (strain BL2 / DSM 15510 / NCIMB 13906)	895
704	B8F481	B8F481_HAEPS	Bacteria	alaS_HAPS_0465	Haemophilus parasuis serovar 5 (strain SH0165)	875
705	B8FKZ9	B8FKZ9_DESAA	Bacteria	Dalk_2944	Desulfatibacillum alkenivorans (strain AK-01)	875
706	B8GC75	B8GC75_CHLAD	Bacteria	Cagg_0096	Chloroflexus aggregans (strain MD-66 / DSM 9485)	894
707	B8GQV5	B8GQV5_THISH	Bacteria	Tgr7_1289	Thioalkalivibrio sp. (strain HL-EbGR7)	865
708	B8H069	B8H069_CAUCN	Bacteria	CCNA_02612	Caulobacter crescentus (strain NA1000 / CB15N)	880
709	B8H9C0	B8H9C0_ARTCA	Bacteria	Achl_2015	Arthrobacter chlorophenolicus (strain A6 / ATCC 700700 / DSM 12862)	898
710	B8HUZ9	B8HUZ9_CYAP4	Bacteria	Cyan7425_0658	Cyanospora sp. (strain PCC 7425 / ATCC 29141)	889
711	B8I408	B8I408_CLOCE	Bacteria	Ccel_2096	Clostridium cellulolyticum (strain ATCC 35319 / DSM 5812 / JCM 6501)	879
712	B8IP31	B8IP31_METNO	Bacteria	Mnod_5505	Methylobacterium nodulans (strain ORS2060 / LMG 21967)	886
713	B8J368	B8J368_DESDA	Bacteria	Ddes_0290	Desulfovibrio desulfuricans (strain ATCC 27774 / DSM 6949)	892
714	B8J8G2	B8J8G2_ANAD2	Bacteria	A2cp1_3925	Anaeromyxobacter dehalogenans (strain 2CP-1 / ATCC BAA-258)	905
715	B8K902	B8K902_VIBPA	Bacteria	alaS_VPMS16_375	Vibrio parahaemolyticus 16	860
716	B8KF69	B8KF69_9GAMM	Bacteria	alaS_NOR53_2290	Gamma proteobacterium NOR5-3	867
717	B8KY71	B8KY71_9GAMM	Bacteria	alaS_NOR51B_2337	Gamma proteobacterium NOR51-B	865
718	B8L290	B8L290_9GAMM	Bacteria	alaS_SSKA14_3194	Stenotrophomonas sp. SKA14	882
719	B8ZKN1	B8ZKN1_STRPJ	Bacteria	alaS_SPN23F13480	Streptococcus pneumoniae (strain ATCC 700669 / Spain 23F-1)	872
720	B8ZUJ6	B8ZUJ6_MYCLB	Bacteria	alaS_MLBr00512	Mycobacterium leprae (strain Br4923)	908
721	B9AAS9	B9AAS9_BORBU	Bacteria	BBU72A_0227	Borrelia burgdorferi 72a	594
722	B9BEC1	B9BEC1_9BURK	Bacteria	alaS_BURMUCGD1_1961	Burkholderia multivorans CGD1	874
723	B9BN49	B9BN49_9BURK	Bacteria	alaS_BURMUCGD2_2276	Burkholderia multivorans CGD2	874
724	B9CIJ2	B9CIJ2_9BURK	Bacteria	alaS_BURMUCGD2M_2363	Burkholderia multivorans CGD2M	874
725	B9CP15	B9CP15_9ACTN	Bacteria	alaS_ATOMI0001_0216	Atopobium rimae ATCC 49626	882
726	B9CUK8	B9CUK8_STACP	Bacteria	alaS_STACA0001_2401	Staphylococcus capitis SK14	876

727	B9DNH3	B9DNH3_STACT	Bacteria	alaS Sca_1230_SCA_1230	Staphylococcus carnosus (strain TM300)	876
728	B9DWF9	B9DWF9_STRU0	Bacteria	alaS SUB1230	Streptococcus uberis (strain ATCC BAA-854 / 0140J)	873
729	B9E196	B9E196_CLOK1	Bacteria	CKR_1220	Clostridium kluyveri (strain NBRC 12016)	879
730	B9E6Z7	B9E6Z7_MACCJ	Bacteria	alaS MCCL_1258	Macrocooccus caseolyticus (strain JCSC5402)	874
731	B9IYF3	B9IYF3_BACQ	Bacteria	alaS BCQ_4172	Bacillus cereus (strain Q1)	880
732	B9JFS6	B9JFS6_AGRRK	Bacteria	alaS2 Arad_2617	Agrobacterium radiobacter (strain K84 / ATCC BAA-868)	886
733	B9JX55	B9JX55_AGRVS	Bacteria	alaS Avi_2557	Agrobacterium vitis (strain S4 / ATCC BAA-846) (Rhizobium vitis (s	887
734	B9K8T8	B9K8T8_THENN	Bacteria	CTN_1195	Thermotoga neapolitana (strain ATCC 49049 / DSM 4359 / NS-E)	864
735	B9KHT5	B9KHT5_ANAMF	Bacteria	alaS AMF_164	Anaplasma marginale (strain Florida)	882
736	B9KKJ6	B9KKJ6_RHOSK	Bacteria	RSKD131_1783	Rhodobacter sphaeroides (strain KD131 / KCTC 12085)	883
737	B9KZ15	B9KZ15_THERP	Bacteria	alaS trd_0726	Thermomicrobium roseum (strain ATCC 27502 / DSM 5159 / P-2)	878
738	B9LH38	B9LH38_CHLSY	Bacteria	Chy400_4156	Chloroflexus aurantiacus (strain ATCC 29364 / DSM 637 / Y-400-fl)	894
739	B9M368	B9M368_GEOSF	Bacteria	Geob_1118	Geobacter sp. (strain FRC-32)	876
740	B9MJ98	B9MJ98_ACJET	Bacteria	Dtpsy_1779	Acidovorax ebreus (strain TPSY) (Diaphorobacter sp. (strain TPSY))	874
741	B9MRX7	B9MRX7_ANATD	Bacteria	Athe_1331	Anaerocellum thermophilum (strain DSM 6725 / Z-1320)	883
742	B9NRH2	B9NRH2_9RHOB	Bacteria	alaS RKLH11_793	Rhodobacteraceae bacterium KLH11	890
743	B9NZB2	B9NZB2_PROMA	Bacteria	alaS P9202_1810	Prochlorococcus marinus str. MIT 9202	886
744	B9R0H4	B9R0H4_9RHOB	Bacteria	alaS SADFL11_5147	Labrenzia alexandrii DFL-11	885
745	B9WWQ1	B9WWQ1_STRSU	Bacteria	SsuiDRAFT_2500	Streptococcus suis 89/1591	872
746	B9X3E8	B9X3E8_BORBU	Bacteria	BBUW9123_0241	Borrelia burgdorferi W191-23	594
747	B9X5E0	B9X5E0_BORBU	Bacteria	BBU64B_0229	Borrelia burgdorferi 64b	594
748	B9XID2	B9XID2_9BACT	Bacteria	Cflav_PD3363	Bacterium Ellin514	908
749	B9YCH0	B9YCH0_9FIRM	Bacteria	HOLDEFILI_03531	Holdemania filiformis DSM 12042	515
750	B9Z519	B9Z519_9NEIS	Bacteria	FuraDRAFT_2454	Lutiella nitroferum 2002	877
751	B9ZW86	B9ZW86_UREUR	Bacteria	alaS UUR8_0385	Ureaplasma urealyticum serovar 8 str. ATCC 27618	906
752	COAFW1	COAFW1_UREUR	Bacteria	alaS UUR2_0383	Ureaplasma urealyticum serovar 2 str. ATCC 27814	906
753	COAIX9	COAIX9_BORBU	Bacteria	BBU118A_0225	Borrelia burgdorferi 118a	594
754	COAKS7	COAKS7_BORBU	Bacteria	BBU94A_0226	Borrelia burgdorferi 94a	594
755	COAPD2	COAPD2_9SPIO	Bacteria	BSV1_0232	Borrelia sp. SV1	594
756	COAPR8	COAPR8_9SPIO	Bacteria	BSPA14S_0221	Borrelia spielmanii A14S	594
757	COAXS2	COAXS2_9ENTR	Bacteria	PROPEN_02643	Proteus penneri ATCC 35198	589
758	COB740	COB740_9FIRM	Bacteria	COPCOM_00961	Coprococcus comes ATCC 27758	855
759	COBHB9	COBHB9_9BACT	Bacteria	Flav2ADRAFT_1185	Flavobacteria bacterium MS024-2A	870
760	COBKT0	COBKT0_9BACT	Bacteria	Flav3CDRAFT_0907	Flavobacteria bacterium MS024-3C	879
761	COBT09	COBT09_9BIFI	Bacteria	BIFPSEUDO_03528	Bifidobacterium pseudocatenulatum DSM 20438	892
762	COCT3T8	COCT3T8_9CLOT	Bacteria	CLOHYLEM_06750	Clostridium hylemonae DSM 15053	879
763	COCIA3	COCIA3_9FIRM	Bacteria	RUMHYD_00567	Blautia hydrogenotrophica DSM 10507	868
764	COD0N9	COD0N9_9CLOT	Bacteria	CLOSTASPAR_02827	Clostridium asparagiforme DSM 15981	887
765	CODRW9	CODRW9_EIKCO	Bacteria	EIKCOROL_00085	Eikenella corrodens ATCC 23834	873
766	COE2Y7	COE2Y7_9CORY	Bacteria	CORMATOL_01349	Corynebacterium matruchotii ATCC 33806	905
767	COEC08	COEC08_9CLOT	Bacteria	CLOSTMETH_01377	Clostridium methylpentosum DSM 5476	879
768	COEL90	COEL90_NEIFL	Bacteria	NEIFLAOT_00695	Neisseria flavescens NRL30031/H210	874
769	COETM1	COETM1_9FIRM	Bacteria	EUBHAL_00752	Eubacterium hallii DSM 3353	867
770	COF8J7	COF8J7_9RICK	Bacteria	WUni_001650	Wolbachia endosymbiont of Muscidifurax uniraptor	535
771	COFX11	COFX11_9FIRM	Bacteria	ROSEINA2194_03291	Roseburia inulinivorans DSM 16841	886
772	COG6T7	COG6T7_9RHIZ	Bacteria	alaS BCETI_3000490	Brucella ceti str. Cudo	885
773	COGKI5	COGKI5_9FIRM	Bacteria	DealDRAFT_2994	Dethiobacter alkaliphilus AHT 1	872
774	COM9L6	COM9L6_STRE4	Bacteria	SEQ_0695	Streptococcus equi subsp. equi (strain 4047)	872
775	COMCT2	COMCT2_STRS7	Bacteria	SZO_13300	Streptococcus equi subsp. zooepidemicus (strain H70)	872
776	CON1U0	CON1U0_9GAMM	Bacteria	alaS MDMS009_307	Methylophaga thiooxydans DMS010	858
777	COPWM0	COPWM0_SALPC	Bacteria	alaS SPC_2868	Salmonella paratyphi C (strain RKS4594)	876
778	COQI89	COQI89_DESAB	Bacteria	alaS1 HRM2_27330	Desulfobacterium autotrophicum (strain ATCC 43914 / DSM 3382 /	872
779	COQTQ9	COQTQ9_PERMH	Bacteria	alaS PERMA_0281	Persephonella marina (strain DSM 14350 / EX-H1)	878
780	COR1G2	COR1G2_BRAHW	Bacteria	alaS BHWA1_01478	Brachyspira hyodysenteriae (strain ATCC 49526 / WA1)	867
781	COR3S3	COR3S3_WOLWR	Bacteria	alaS WRi_008260	Wolbachia sp. subsp. Drosophila simulans (strain wRi)	880
782	CORJG8	CORJG8_BRUMB	Bacteria	alaS BMEA_A1245	Brucella melitensis biotype 2 (strain ATCC 23457)	885
783	COSXK6	COSXK6_BORBU	Bacteria	BBUBOL26_0222	Borrelia burgdorferi Bol26	594
784	COT1D6	COT1D6_BORBU	Bacteria	BBU29805_0234	Borrelia burgdorferi 29805	594
785	COVK19	COVK19_9GAMM	Bacteria	alaS HMPREF0023_1488	Acinetobacter sp. ATCC 27244	884
786	COVVV0	COVVV0_9CORY	Bacteria	alaS HMPREF0294_1958	Corynebacterium glucuronolyticum ATCC 51867	889
787	COW1N2	COW1N2_9ACTO	Bacteria	alaS HMPREF0044_1322	Actinomyces coleocanis DSM 15436	895
788	COW3N6	COW3N6_9ACTO	Bacteria	alaS HMPREF0058_0480	Actinomyces urogenitalis DSM 15434	904
789	COW9Q5	COW9Q5_9FIRM	Bacteria	ACDG_00205	Acidaminococcus sp. D21	874
790	COWL03	COWL03_9CORY	Bacteria	alaS HMPREF0276_2139	Corynebacterium accolens ATCC 49725	896
791	COWS24	COWS24_LACBU	Bacteria	alaS HMPREF0497_2247	Lactobacillus buchneri ATCC 11577	887
792	COWX04	COWX04_LACFE	Bacteria	alaS HMPREF0511_0655	Lactobacillus fermentum ATCC 14931	892
793	COX543	COX543_ENTFA	Bacteria	alaS HMPREF0348_1628	Enterococcus faecalis TX0104	880
794	COXLD8	COXLD8_LACHI	Bacteria	alaS HMPREF0519_2049	Lactobacillus hilgardii ATCC 8290	887
795	COXSS2	COXSS2_9CORY	Bacteria	alaS HMPREF0298_1492	Corynebacterium lipophiloflavum DSM 44291	888
796	COXVK0	COXVK0_BURPS	Bacteria	alaS BUH_2271	Burkholderia pseudomallei Pakistan 9	874
797	COYWQ7	COYWQ7_LACRE	Bacteria	alaS HMPREF0535_0222	Lactobacillus reuteri MM2-3	884
798	COZAS0	COZAS0_BREBN	Bacteria	alaS BBR47_19020	Brevibacillus brevis (strain 47 / JCM 6285 / NBRC 100599)	882
799	COZZA8	COZZA8_RHOE4	Bacteria	alaS RER_29850	Rhodococcus erythropolis (strain PR4 / NBRC 100887)	890
800	C1A4D2	C1A4D2_GEMAT	Bacteria	alaS GAU_1915	Gemmatimonas aurantiaca (strain T-27 / DSM 14586 / JCM 11422)	928
801	C1AF24	C1AF24_MYCBT	Bacteria	alaS JTY_2572	Mycobacterium bovis (strain BCG / Tokyo 172 / ATCC 35737 / TMC	904
802	C1B4H4	C1B4H4_RHOOB	Bacteria	alaS ROP_69160	Rhodococcus opacus (strain B4)	890
803	C1C7Y3	C1C7Y3_STRP7	Bacteria	alaS SP70585_1421	Streptococcus pneumoniae (strain 70585)	872



804	C1CEX1	C1CEX1_STRZJ	Bacteria	alaS SPJ_1282	Streptococcus pneumoniae (strain JJA)	872
805	C1CL91	C1CL91_STRZP	Bacteria	alaS SPP_1402	Streptococcus pneumoniae (strain P1031)	872
806	C1CQX3	C1CQX3_STRZT	Bacteria	alaS SPT_0891	Streptococcus pneumoniae (strain Taiwan19F-14)	872
807	C1CXW8	C1CXW8_DEIDV	Bacteria	alaS Deide_19270	Deinococcus deserti (strain VCD115 / DSM 17065 / LMG 22923)	891
808	C1D7N4	C1D7N4_LARHH	Bacteria	syA LHK_01485	Laribacter hongkongensis (strain HLHK9)	877
809	C1DQF9	C1DQF9_AZOV	Bacteria	alaS Avin_34460	Azotobacter vinelandii (strain DJ / ATCC BAA-1303)	874
810	C1DUS1	C1DUS1_SULAA	Bacteria	alaS SULAZ_0881	Sulfurihydrogenibium azorense (strain Az-Fu1 / DSM 15241 / OCM	875
811	C1EST3	C1EST3_BACC3	Bacteria	alaS BCA_4500	Bacillus cereus (strain 03BB102)	880
812	C1FTC0	C1FTC0_CLOBJ	Bacteria	alaS CLM_2871	Clostridium botulinum (strain Kyoto / Type A2)	879
813	C1HJ99	C1HJ99_9ESCH	Bacteria	ESAG_01694	Escherichia sp. 3_2_53FAA	876
814	C1HZT1	C1HZT1_NEIGO	Bacteria	NGAG_01779	Neisseria gonorrhoeae 1291	874
815	C1I7T1	C1I7T1_9CLOT	Bacteria	CSBG_01858	Clostridium sp. 7_2_43FAA	879
816	C1KVF1	C1KVF1_LISMC	Bacteria	alaS Lm4b_01514	Listeria monocytogenes serotype 4b (strain Clip81459)	879
817	C1MAL7	C1MAL7_9ENTR	Bacteria	CSAG_02529	Citrobacter sp. 30_2	875
818	C1NCP5	C1NCP5_9ESCH	Bacteria	ESCG_00067	Escherichia sp. 1_1_43	876
819	C1PB07	C1PB07_BACCO	Bacteria	BcoaDRAFT_6319	Bacillus coagulans 36D1	881
820	C2BDF6	C2BDF6_9FIRM	Bacteria	alaS HMPREF0072_0376	Anaerococcus lactolyticus ATCC 51172	872
821	C2CED5	C2CED5_VIBCH	Bacteria	VCG_003478	Vibrio cholerae 12129(1)	860
822	C2CFN2	C2CFN2_9FIRM	Bacteria	alaS HMPREF0077_0292	Anaerococcus tetradius ATCC 35098	870
823	C2CPF7	C2CPF7_CORST	Bacteria	alaS HMPREF0308_1286	Corynebacterium striatum ATCC 6940	895
824	C2D488	C2D488_LACBR	Bacteria	alaS HMPREF0496_2360	Lactobacillus brevis subsp. gravesensis ATCC 27305	887
825	C2D840	C2D840_9ACTN	Bacteria	alaS HMPREF0091_0672	Atopobium vaginae DSM 15829	882
826	C2DD44	C2DD44_ENTFA	Bacteria	alaS HMPREF0349_1154	Enterococcus faecalis TX1322	741
827	C2DX70	C2DX70_ECOLX	Bacteria	alaS HMPREF0358_4824	Escherichia coli 83972	876
828	C2E2R8	C2E2R8_LACJO	Bacteria	alaS HMPREF0528_0042	Lactobacillus johnsonii ATCC 33200	892
829	C2EG34	C2EG34_9LACO	Bacteria	alaS HMPREF0545_0606	Lactobacillus salivarius ATCC 11741	917
830	C2ER86	C2ER86_9LACO	Bacteria	alaS HMPREF0548_2182	Lactobacillus ultunensis DSM 16047	879
831	C2ETU3	C2ETU3_9LACO	Bacteria	alaS HMPREF0549_0879	Lactobacillus vaginalis ATCC 49540	884
832	C2F7P6	C2F7P6_LACRE	Bacteria	alaS HMPREF0536_1627	Lactobacillus reuteri MM4-1A	884
833	C2FDV5	C2FDV5_LACPA	Bacteria	alaS HMPREF0530_1763	Lactobacillus paracasei subsp. paracasei ATCC 25302	914
834	C2FZ84	C2FZ84_9SPHI	Bacteria	alaS HMPREF0765_2640	Sphingobacterium spiritivorum ATCC 33300	599
835	C2GHX1	C2GHX1_9CORY	Bacteria	alaS HMPREF0293_1514	Corynebacterium glucuronolyticum ATCC 51866	889
836	C2GNN0	C2GNN0_LACRE	Bacteria	alaS HMPREF0534_0790	Lactobacillus reuteri CF48-3A	895
837	C2GTK8	C2GTK8_BIFLI	Bacteria	alaS HMPREF0175_0355	Bifidobacterium longum subsp. infantis ATCC 55813	893
838	C2H5A4	C2H5A4_ENTFA	Bacteria	alaS HMPREF0345_2342	Enterococcus faecalis ATCC 29200	880
839	C2HAV4	C2HAV4_ENTFC	Bacteria	alaS HMPREF0352_1336	Enterococcus faecium TX1330	880
840	C2HMM5	C2HMM5_LACAC	Bacteria	alaS HMPREF0492_0779	Lactobacillus acidophilus ATCC 4796	879
841	C2HUC1	C2HUC1_VIBCH	Bacteria	VCA_002823	Vibrio cholerae bv. albensis VL426	860
842	C2I4B4	C2I4B4_VIBCH	Bacteria	VIF_001364	Vibrio cholerae TM 11079-80	860
843	C2IK39	C2IK39_VIBCH	Bacteria	VCC_003680	Vibrio cholerae RC9	860
844	C2INK4	C2INK4_VIBCH	Bacteria	VCB_000456	Vibrio cholerae TMA 21	860
845	C2JEL4	C2JEL4_VIBCH	Bacteria	VCF_002379	Vibrio cholerae BX 330286	860
846	C2JIM9	C2JIM9_ENTFA	Bacteria	alaS HMPREF0346_0340	Enterococcus faecalis HH22	880
847	C2KCT0	C2KCT0_9LACO	Bacteria	alaS HMPREF0506_0655	Lactobacillus crispatus JV-V01	879
848	C2KL66	C2KL66_LEUMC	Bacteria	alaS HMPREF0555_1382	Leuconostoc mesenteroides subsp. cremoris ATCC 19254	893
849	C2KQ02	C2KQ02_9ACTO	Bacteria	alaS HMPREF0577_0871	Mobiluncus mulieris ATCC 35243	894
850	C2LMF5	C2LMF5_PROMI	Bacteria	alaS HMPREF0693_3059	Proteus mirabilis ATCC 29906	875
851	C2LTP0	C2LTP0_STRSL	Bacteria	alaS STRSA0001_0597	Streptococcus salivarius SK126	872
852	C2LY74	C2LY74_STAHO	Bacteria	alaS STAHO0001_1750	Staphylococcus hominis SK119	876
853	C2M2M5	C2M2M5_CAPGI	Bacteria	alaS CAPGI0001_0018	Capnocytophaga gingivalis ATCC 33624	877
854	C2MD45	C2MD45_9PORP	Bacteria	alaS PORUE0001_0366	Porphyromonas uenonis 60-3	872
855	C2MR23	C2MR23_BACCE	Bacteria	bcere0001_40430	Bacillus cereus m1293	880
856	C2N6Q8	C2N6Q8_BACCE	Bacteria	bcere0002_42510	Bacillus cereus ATCC 10876	880
857	C2NN84	C2NN84_BACCE	Bacteria	bcere0004_41710	Bacillus cereus BGSC 6E1	880
858	C2P427	C2P427_BACCE	Bacteria	bcere0005_40080	Bacillus cereus 172560W	880
859	C2PKJ7	C2PKJ7_BACCE	Bacteria	bcere0006_41440	Bacillus cereus MM3	880
860	C2Q184	C2Q184_BACCE	Bacteria	bcere0007_40840	Bacillus cereus AH621	880
861	C2QHI0	C2QHI0_BACCE	Bacteria	bcere0009_41030	Bacillus cereus R309803	880
862	C2QYP1	C2QYP1_BACCE	Bacteria	bcere0010_41830	Bacillus cereus ATCC 4342	880
863	C2RDN0	C2RDN0_BACCE	Bacteria	bcere0011_41270	Bacillus cereus m1550	880
864	C2RTI4	C2RTI4_BACCE	Bacteria	bcere0012_40980	Bacillus cereus BDRD-ST24	880
865	C2S9C3	C2S9C3_BACCE	Bacteria	bcere0013_42190	Bacillus cereus BDRD-ST26	880
866	C2SQL5	C2SQL5_BACCE	Bacteria	bcere0014_41130	Bacillus cereus BDRD-ST196	880
867	C2T6E1	C2T6E1_BACCE	Bacteria	bcere0015_41110	Bacillus cereus BDRD-Cer4	880
868	C2TMD5	C2TMD5_BACCE	Bacteria	bcere0016_42140	Bacillus cereus 95/8201	880
869	C2U2Y8	C2U2Y8_BACCE	Bacteria	bcere0017_41550	Bacillus cereus Rock1-3	880
870	C2UJ98	C2UJ98_BACCE	Bacteria	bcere0018_41050	Bacillus cereus Rock1-15	880
871	C2V0Y4	C2V0Y4_BACCE	Bacteria	bcere0019_41580	Bacillus cereus Rock3-28	880
872	C2VHA0	C2VHA0_BACCE	Bacteria	bcere0020_40840	Bacillus cereus Rock3-29	880
873	C2VZ97	C2VZ97_BACCE	Bacteria	bcere0021_41830	Bacillus cereus Rock3-42	791
874	C2WCF7	C2WCF7_BACCE	Bacteria	bcere0022_35250	Bacillus cereus Rock3-44	880
875	C2WT61	C2WT61_BACCE	Bacteria	bcere0023_42830	Bacillus cereus Rock4-2	880
876	C2XH45	C2XH45_BACCE	Bacteria	bcere0025_40640	Bacillus cereus F65185	880
877	C2XZM2	C2XZM2_BACCE	Bacteria	bcere0026_41560	Bacillus cereus AH603	880
878	C2YFU3	C2YFU3_BACCE	Bacteria	bcere0027_40690	Bacillus cereus AH676	880
879	C2YWX3	C2YWX3_BACCE	Bacteria	bcere0028_40830	Bacillus cereus AH1271	880
880	C2ZD74	C2ZD74_BACCE	Bacteria	bcere0029_41390	Bacillus cereus AH1272	880

881	C2ZUQ9	C2ZUQ9 BACCE	Bacteria	bcere0030_41120	Bacillus cereus AH1273	880
882	C3AB79	C3AB79 BACMY	Bacteria	bmyco0001_40140	Bacillus mycoides DSM 2048	880
883	C3AQZ2	C3AQZ2 BACMY	Bacteria	bmyco0002_36250	Bacillus mycoides Rock1-4	880
884	C3B8E0	C3B8E0 BACMY	Bacteria	bmyco0003_37320	Bacillus mycoides Rock3-17	880
885	C3BQC0	C3BQC0 9BACI	Bacteria	bpmyx0001_38630	Bacillus pseudomycoloides DSM 12442	880
886	C3C8A8	C3C8A8 BACTU	Bacteria	bthur0001_43100	Bacillus thuringiensis serovar tochiensis BGSC 4Y1	880
887	C3CPG5	C3CPG5 BACTU	Bacteria	bthur0002_42410	Bacillus thuringiensis Bt407	880
888	C3D7F8	C3D7F8 BACTU	Bacteria	bthur0003_42390	Bacillus thuringiensis serovar thuringiensis str. T01001	880
889	C3DQK3	C3DQK3 BACTS	Bacteria	bthur0004_42610	Bacillus thuringiensis serovar sotto str. T04001	880
890	C3E8X7	C3E8X7 BACTU	Bacteria	bthur0005_41220	Bacillus thuringiensis serovar pakistani str. T13001	880
891	C3ER02	C3ER02 BACTK	Bacteria	bthur0006_40420	Bacillus thuringiensis serovar kurstaki str. T03a001	880
892	C3F7D8	C3F7D8 BACTU	Bacteria	bthur0007_42280	Bacillus thuringiensis serovar monterrey BGSC 4A1	880
893	C3FQU0	C3FQU0 BACTB	Bacteria	bthur0008_41930	Bacillus thuringiensis serovar berliner ATCC 10792	880
894	C3G8J6	C3G8J6 BACTU	Bacteria	bthur0009_41540	Bacillus thuringiensis serovar andalousiensis BGSC 4AW1	880
895	C3GPC7	C3GPC7 BACTU	Bacteria	bthur0010_41180	Bacillus thuringiensis serovar pondicheriensis BGSC 4BA1	880
896	C3H6M6	C3H6M6 BACTU	Bacteria	bthur0011_41200	Bacillus thuringiensis serovar huazhongensis BGSC 4BD1	880
897	C3HP06	C3HP06 BACTU	Bacteria	bthur0012_42340	Bacillus thuringiensis serovar pulsiensis BGSC 4CC1	880
898	C3I6I7	C3I6I7 BACTU	Bacteria	bthur0013_43720	Bacillus thuringiensis IBL 200	880
899	C3IPQ3	C3IPQ3 BACTU	Bacteria	bthur0014_40840	Bacillus thuringiensis IBL 4222	880
900	C3JBR7	C3JBR7 9PORP	Bacteria	alaS POREN0001_1803	Porphyromonas endodontalis ATCC 35406	873
901	C3JSR7	C3JSR7 RHOER	Bacteria	alaS RHOER0001_1207	Rhodococcus erythropolis SK121	890
902	C3JXY1	C3JXY1 PSEFS	Bacteria	PFLU_4748	Pseudomonas fluorescens (strain SBW25)	872
903	C3L150	C3L150 CLOB6	Bacteria	alaS CLJ_B2794	Clostridium botulinum (strain 657 / Type Ba4)	879
904	C3L5Z4	C3L5Z4 BACAC	Bacteria	alaS BAMEG_4653	Bacillus anthracis (strain CDC 684 / NRRL 3495)	880
905	C3LS35	C3LS35 VIBCM	Bacteria	alaS VCM66_0503	Vibrio cholerae serotype O1 (strain M66-2)	860
906	C3MD92	C3MD92 RHISN	Bacteria	alaS1_NGR_c16460	Rhizobium sp. (strain NGR234)	887
907	C3NW35	C3NW35 VIBCI	Bacteria	VCD_001060	Vibrio cholerae serotype O1 (strain MJ-1236)	860
908	C3P977	C3P977 BACAA	Bacteria	alaS BAA_4636	Bacillus anthracis (strain A0248)	880
909	C3PGN2	C3PGN2 CORA7	Bacteria	alaS cauri_1393	Corynebacterium aurimucosum (strain ATCC 700975 / DSM 44827)	895
910	C3PLZ2	C3PLZ2 RICAE	Bacteria	alaS RAF_ORF1214	Rickettsia africae (strain ESF-5)	878
911	C3QHI8	C3QHI8 9BACE	Bacteria	BSAG_03133	Bacteroides sp. D1	871
912	C3QZN6	C3QZN6 9BACE	Bacteria	BSCG_04348	Bacteroides sp. 2_2_4	872
913	C3REP2	C3REP2 9BACE	Bacteria	BSEG_03642	Bacteroides dorei 5_1_36/D4	872
914	C3RKU2	C3RKU2 9FIRM	Bacteria	MBAG_01361	Coprobacillus sp. D7	869
915	C3WCX2	C3WCX2_FUSMR	Bacteria	FMAG_01290	Fusobacterium mortiferum ATCC 9817	866
916	C3WK63	C3WK63 9FUSO	Bacteria	FSAG_01279	Fusobacterium sp. 2_1_31	867
917	C3WS92	C3WS92 9FUSO	Bacteria	FSCG_00244	Fusobacterium sp. 4_1_13	867
918	C3WXS8	C3WXS8 9FUSO	Bacteria	FSDG_00281	Fusobacterium sp. 7_1	867
919	C4B3N9	C4B3N9 BURMA	Bacteria	alaS BMAGB8_0954	Burkholderia mallei GB8 horse 4	874
920	C4EXI1	C4EXI1 HAEIF	Bacteria	alaS CGSHI7P49H1_03423	Haemophilus influenzae 7P49H1	874
921	C4F4H3	C4F4H3 HAEIF	Bacteria	alaS CGSHI6P18H1_03709	Haemophilus influenzae 6P18H1	874
922	C4F885	C4F885 9ACTN	Bacteria	COLINT_02255	Collinsella intestinalis DSM 13280	884
923	C4FF74	C4FF74 9BIFI	Bacteria	BIFANG_02974	Bifidobacterium angulatum DSM 20098	892
924	C4FIL8	C4FIL8 9AQUI	Bacteria	alaS SULYE_0403	Sulfurihydrogenibium yellowstonense SS-5	876
925	C4FPM1	C4FPM1_9FIRM	Bacteria	VEIDISOL_00847	Veillonella dispar ATCC 17748	871
926	C4FTB6	C4FTB6_9FIRM	Bacteria	GCWU000282_00151	Catonella morbi ATCC 51271	881
927	C4FYX2	C4FYX2 ABIDE	Bacteria	GCWU000182_00200	Abiotrophia defectiva ATCC 49176	888
928	C4G984	C4G984_9FIRM	Bacteria	GCWU000342_00535	Shuttleworthia satelles DSM 14600	921
929	C4GLK0	C4GLK0 9NEIS	Bacteria	GCWU000324_02571	Kingella oralis ATCC 51147	963
930	C4H9M8	C4H9M8 YERPE	Bacteria	alaS YPF_3980	Yersinia pestis biovar Orientalis str. India 195	875
931	C4HBU1	C4HBU1 YERPE	Bacteria	alaS YPH_1197	Yersinia pestis biovar Orientalis str. PEXU2	875
932	C4HZE2	C4HZE2 YERPE	Bacteria	alaS YPS_4237	Yersinia pestis Pestoides A	875
933	C4IHK5	C4IHK5 CLOBU	Bacteria	alaS CLP_2736	Clostridium butyricum E4 str. BoNT E BL5262	879
934	C4IRQ1	C4IRQ1 BRUAB	Bacteria	alaS BAAA_2000128	Brucella abortus str. 2308 A	885
935	C4K2W1	C4K2W1_RICPU	Bacteria	alaS RPR_07495	Rickettsia peacockii (strain Rustic)	878
936	C4K831	C4K831_HAMD5	Bacteria	alaS HDEF_0012	Hamiltonella defensa subsp. Acyrthosiphon pisum (strain 5AT)	875
937	C4KWD1	C4KWD1_BURPS	Bacteria	alaS GBP346_A1684	Burkholderia pseudomallei MSHR346	874
938	C4L551	C4L551_EXISA	Bacteria	EAT1b_2722	Exiguobacterium sp. (strain ATCC BAA-1283 / AT1b)	880
939	C4LBP8	C4LBP8_TOLAT	Bacteria	Tola_2729	Tolomonas auensis (strain DSM 9187 / TA4)	874
940	C4LIV5	C4LIV5_CORK4	Bacteria	ckrop_1007	Corynebacterium kroppenstedtii (strain DSM 44385 / CCUG 35717)	886
941	C4PNR0	C4PNR0_CHLTZ	Bacteria	alaS CTB_7541	Chlamydia trachomatis serovar B (strain TZ1A828/OT)	875
942	C4PQD6	C4PQD6_CHLTZ	Bacteria	alaS JALI_7541	Chlamydia trachomatis serovar B (strain Jali20/OT)	875
943	C4RHM9	C4RHM9_9ACTO	Bacteria	MCAG_04862	Micromonospora sp. ATCC 39149	636
944	C4S0P3	C4S0P3_YERBE	Bacteria	yberc0001_12000	Yersinia bercovieri ATCC 43970	875
945	C4SIL4	C4SIL4_YERMO	Bacteria	ymoll0001_41150	Yersinia mollaretii ATCC 43969	875
946	C4SJK2	C4SJK2_YERFR	Bacteria	yfred0001_18890	Yersinia frederiksenii ATCC 33641	875
947	C4SWV0	C4SWV0_YERIN	Bacteria	yinte0001_31310	Yersinia intermedia ATCC 29909	875
948	C4TS18	C4TS18_YERKR	Bacteria	ykris0001_12180	Yersinia kristensenii ATCC 33638	847
949	C4U7H3	C4U7H3_YERAL	Bacteria	yaldo0001_26700	Yersinia aldovae ATCC 35236	847
950	C4UN38	C4UN38_YERRU	Bacteria	yrucc0001_32400	Yersinia ruckeri ATCC 29473	874
951	C4V0A6	C4V0A6_YERRO	Bacteria	yrohd0001_38770	Yersinia rohdei ATCC 43380	846
952	C4V2H9	C4V2H9_9FIRM	Bacteria	alaS HMPREF0908_0723	Selenomonas flueggei ATCC 43531	890
953	C4VNP1	C4VNP1_9LACO	Bacteria	alaS LACJE0001_1368	Lactobacillus jensenii 269-3	878
954	C4VTC3	C4VTC3_9LACO	Bacteria	alaS HMPREF0890_1426	Lactobacillus gasserii 202-4	882
955	C4WC75	C4WC75_STAWA	Bacteria	alaS STAWA0001_0750	Staphylococcus warneri L37603	876
956	C4WK96	C4WK96_9RHIZ	Bacteria	alaS OINT_1001329	Ochrobactrum intermedium LMG 3301	885
957	C4XCF9	C4XCF9_KLEPN	Bacteria	alaS KP1_4291	Klebsiella pneumoniae subsp. pneumoniae NTUH-K2044	875



958	C4XQT6	C4XQT6 DESMR	Bacteria	alaS DMR_43290	Desulfovibrio magneticus (strain ATCC 700980 / DSM 13731 / RS-1)	880
959	C4YW76	C4YW76_9RICK	Bacteria	alaS REIS_1725	Rickettsia endosymbiont of Ixodes scapularis	878
960	C4Z054	C4Z054_EUBE2	Bacteria	EUBELI_00966	Eubacterium eligens (strain ATCC 27750 / VPI C15-48)	880
961	C4ZAS5	C4ZAS5_EUBR3	Bacteria	EUBREC_1836	Eubacterium rectale (strain ATCC 33656 / VPI 0990)	886
962	C4ZPD3	C4ZPD3_THASP	Bacteria	Tmz1t_1571	Thauera sp. (strain MZ1T)	873
963	C4ZYU2	C4ZYU2_ECOWB	Bacteria	alaS BWG_2433	Escherichia coli (strain K12 / MC4100 / BW2952)	876
964	C5A8H5	C5A8H5_BURGB	Bacteria	bglu_1g22220	Burkholderia glumae (strain BGR1)	874
965	C5ATF9	C5ATF9_METEA	Bacteria	alaS MexAM1_META1p2718	Methylobacterium extorquens (strain ATCC 14718 / DSM 1338 / AM)	891
966	C5BGH4	C5BGH4_EDWI9	Bacteria	NT01EI_3239	Edwardsiella ictaluri (strain 93-146)	875
967	C5BMQ0	C5BMQ0_TERTT	Bacteria	alaS TERTU_2811	Teredinibacter turnerae (strain ATCC 39867 / T7901)	866
968	C5C5S8	C5C5S8_BEUC1	Bacteria	Bcav_2014	Beutenbergia cavernae (strain ATCC BAA-8 / DSM 12333 / NBRC 10)	896
969	C5CCG5	C5CCG5_MICLC	Bacteria	Mlut_12720	Micrococcus luteus (strain ATCC 4698 / IFO 3333 / NCTC 2665)	903
970	C5CF31	C5CF31_KOSOT	Bacteria	Kole_1606	Kosmotoga olearia (strain TBF 19.5.1)	873
971	C5CQU9	C5CQU9_VARPS	Bacteria	Vapar_3176	Variovorax paradoxus (strain S110)	874
972	C5D4Z3	C5D4Z3_GEOWS	Bacteria	GWCH70_2490	Geobacillus sp. (strain WCH70)	877
973	C5EAN4	C5EAN4_BIFLI	Bacteria	BLIG_01029	Bifidobacterium longum subsp. infantis CCUG 52486	893
974	C5EUG9	C5EUG9_9FIRM	Bacteria	CBFG_05375	Clostridium bacterium 1_7_47FAA	887
975	C5FAD1	C5FAD1_LACPA	Bacteria	LBPG_02847	Lactobacillus paracasei subsp. paracasei 8700:2	878
976	C5G1N5	C5G1N5_9LACO	Bacteria	LBJG_00092	Lactobacillus jensenii 1153	878
977	C5N646	C5N646_STAA3	Bacteria	alaS HMPREF0776_2655	Staphylococcus aureus subsp. aureus USA300_TCH959	877
978	C5NF16	C5NF16_BURMA	Bacteria	alaS BMAPRL20_A0910	Burkholderia mallei PRL-20	874
979	C5NYK5	C5NYK5_9BACL	Bacteria	alaS GEMHA0001_0545	Gemella haemolysans ATCC 10379	873
980	C5PZH7	C5PZH7_STAAU	Bacteria	alaS HMPREF0774_0607	Staphylococcus aureus subsp. aureus TCH130	877
981	C5Q9N2	C5Q9N2_STAEP	Bacteria	alaS HMPREF0789_1306	Staphylococcus epidermidis BCM-HMP0060	876
982	C5QT04	C5QT04_STAEP	Bacteria	alaS HMPREF0793_2360	Staphylococcus epidermidis M23864:W1	876
983	C5QXM5	C5QXM5_STAEP	Bacteria	alaS HMPREF0791_1418	Staphylococcus epidermidis W23144	876
984	C5RD17	C5RD17_WEIPA	Bacteria	alaS HMPREF0877_1863	Weissella paramesenteroides ATCC 33313	888
985	C5S370	C5S370_9PAST	Bacteria	alaS AM305_11620	Actinobacillus minor NM305	874
986	C5T6Y3	C5T6Y3_ACIDE	Bacteria	AcdelDRAFT_2663	Acidovorax delafieldii 2AN	874
987	C5THD7	C5THD7_ZYMMO	Bacteria	ZmobDRAFT_1428	Zymomonas mobilis subsp. mobilis ATCC 10988	930
988	C5TN06	C5TN06_NEIFL	Bacteria	alaS NEIFL0001_1257	Neisseria flavescens SK114	874
989	C5UXZ9	C5UXZ9_CLOBO	Bacteria	alaS CLO_2636	Clostridium botulinum E1 str. 'BoNT E Beluga'	879
990	C5VSA6	C5VSA6_CLOBO	Bacteria	alaS CLG_B0851	Clostridium botulinum D str. 1873	879
991	C5VX73	C5VX73_STRSE	Bacteria	alaS SSU1076	Streptococcus suis (strain P1/7)	872
992	C5W808	C5W808_ECOWB	Bacteria	alaS B21_02512	Escherichia coli (strain B / BL21)	876
993	C5WHR0	C5WHR0_STRDG	Bacteria	alaS SDEG_1430	Streptococcus dysgalactiae subsp. equisimilis (strain GGS_124)	872
994	C5ZEA9	C5ZEA9_BURPS	Bacteria	alaS BURPS1106B_A0904	Burkholderia pseudomallei 1106b	874
995	C6A852	C6A852_BIFLB	Bacteria	alaS Balac_0939	Bifidobacterium animalis subsp. lactis (strain BI-04 / DGCC2908 / R)	899
996	C6AEB2	C6AEB2_BARGA	Bacteria	alaS Bgr_12960	Bartonella grahamii (strain as4aup)	890
997	C6AIRO	C6AIRO_BIFAS	Bacteria	alaS Balat_0939	Bifidobacterium animalis subsp. lactis (strain DSM 10140 / JCM 106)	899
998	C6AQK7	C6AQK7_AGGAN	Bacteria	NT05HA_1789	Aggregatibacter aphrophilus (strain NJ8700) (Haemophilus aphroph)	874
999	C6AZP1	C6AZP1_RHILS	Bacteria	Rleg_2168	Rhizobium leguminosarum bv. trifolii (strain WSM1325)	884
1000	C6BES8	C6BES8_RALP1	Bacteria	Rpic12D_0814	Ralstonia pickettii (strain 12D)	893
1001	C6C1J8	C6C1J8_DESAD	Bacteria	Desal_3122	Desulfovibrio salexigens (strain ATCC 14822 / DSM 2638 / NCIB 84)	880
1002	C6CBL9	C6CBL9_DICDC	Bacteria	Dd703_0998	Dickeya dadantii (strain Ech703)	875
1003	C6CMT2	C6CMT2_DICZE	Bacteria	Dd1591_0983	Dickeya zeae (strain Ech1591)	875
1004	C6D7T8	C6D7T8_PAESJ	Bacteria	Pjdr2_4346	Paenibacillus sp. (strain JDR-2)	877
1005	C6DCQ9	C6DCQ9_PCCPP	Bacteria	PC1_3211	Pectobacterium carotovorum subsp. carotovorum (strain PC1)	875
1006	C6DME0	C6DME0_MYCTK	Bacteria	TBMG_01417	Mycobacterium tuberculosis (strain KZN 1435 / MDR)	904
1007	C6E6X9	C6E6X9_GEOSM	Bacteria	GM21_3738	Geobacter sp. (strain M21)	875
1008	C6EJT4	C6EJT4_ECOBD	Bacteria	alaS ECBD_1028 ECD_0254	Escherichia coli (strain B / BL21-DE3)	876
1009	C6GPH2	C6GPH2_STRSX	Bacteria	alaS SSUSC84_1109	Streptococcus suis (strain SC84)	872
1010	C6GXJ9	C6GXJ9_STRS4	Bacteria	alaS SSUBM407_0713	Streptococcus suis (strain BM407)	872
1011	C6HU39	C6HU39_9BACT	Bacteria	UBAL3_44810104	Leptospirillum ferrodiazotrophum	884
1012	C6I176	C6I176_9BACE	Bacteria	BSHG_00884	Bacteroides sp. 3_2_5	872
1013	C6ILP9	C6ILP9_9BACE	Bacteria	BSIG_02670	Bacteroides sp. 1_1_6	872
1014	C6IZT7	C6IZT7_9BACL	Bacteria	POTG_01664	Paenibacillus sp. oral taxon 786 str. D14	874
1015	C6JAV4	C6JAV4_9FIRM	Bacteria	RSAG_01071	Ruminococcus sp. 5_1_39BFAA	879
1016	C6JNK7	C6JNK7_FUSVA	Bacteria	FVAG_00294	Fusobacterium varium ATCC 27725	866
1017	C6LLI0	C6LLI0_9FIRM	Bacteria	BRYFOR_09527	Marvinbryantia formatexigens DSM 14469	879
1018	C6M373	C6M373_NEISI	Bacteria	NEISICOT_00964	Neisseria sicca ATCC 29256	874
1019	C6NX53	C6NX53_9GAMM	Bacteria	ACA_2464	Acidithiobacillus caldus ATCC 51756	880
1020	C6Q0Y6	C6Q0Y6_9CLOT	Bacteria	CcarbDRAFT_4703	Clostridium carboxidivorans P7	662
1021	C6R4R1	C6R4R1_9MICC	Bacteria	alaS ROTMU0001_1088	Rothia mucilaginosa ATCC 25296	895
1022	C6RA46	C6RA46_9CORY	Bacteria	alaS CORTU0001_1465	Corynebacterium tuberculostearicum SK141	894
1023	C6RNV8	C6RNV8_ACIRA	Bacteria	alaS ACIRA0001_2795	Acinetobacter radioresistens SK82	897
1024	C6RUW1	C6RUW1_VIBCH	Bacteria	VCH_000537	Vibrio cholerae CIRS101	860
1025	C6S855	C6S855_NEIML	Bacteria	alaS NMO_1423	Neisseria meningitidis (strain alpha14)	885
1026	C6SBA9	C6SBA9_NEIME	Bacteria	alaS NME_0571	Neisseria meningitidis alpha153	885
1027	C6SKL8	C6SKL8_NEIME	Bacteria	alaS NMW_1489	Neisseria meningitidis alpha275	885
1028	C6SRM2	C6SRM2_STRMN	Bacteria	SmuNN2025_1338	Streptococcus mutans serotype c (strain NN2025)	872
1029	C6TZN4	C6TZN4_BURPS	Bacteria	alaS BURPS1710A_2103	Burkholderia pseudomallei 1710a	874
1030	C6UC46	C6UC46_ECOWB	Bacteria	alaS ECB_02547	Escherichia coli (strain B / REL606)	876
1031	C6URM9	C6URM9_ECOST	Bacteria	alaS ECSP_3644	Escherichia coli O157:H7 (strain TW14359 / EHEC)	876
1032	C6V432	C6V432_NEORI	Bacteria	alaS NRI_0152	Neorickettsia risticii (strain Illinois)	848
1033	C6VRI1	C6VRI1_LACPJ	Bacteria	alaS JDM1_1909	Lactobacillus plantarum (strain JDM1)	880
1034	C6VWV7	C6VWV7_DYAFD	Bacteria	Dfer_5667	Dyadobacter fermentans (strain ATCC 700827 / DSM 18053 / NS11)	886

1035	C6W914	C6W914 ACTMD	Bacteria	Amir_5265	Actinosynnema mirum (strain ATCC 29888 / DSM 43827 / NBRC 14	890
1036	C6WY09	C6WY09 METML	Bacteria	Mmol_1905	Methylothermobacter mobilis (strain JLW8 / ATCC BAA-1282 / DSM 17540	878
1037	C6WZD4	C6WZD4 FLAB3	Bacteria	FIC_00507	Flavobacteriaceae bacterium (strain 3519-10)	893
1038	C6X7H0	C6X7H0 METSD	Bacteria	Msip34_2193	Methylovorus sp. (strain SIP3-4) (Methylothermobacter sp. (strain SIP3-4)	874
1039	C6XHC1	C6XHC1 LIBAP	Bacteria	alaS CLIBASIA_00380	Liberibacter asiaticus (strain psy62)	898
1040	C6XLQ5	C6XLQ5 HIRBI	Bacteria	Hbal_0259	Hirschia baltica (strain ATCC 49814 / DSM 5838 / IFAM 1418)	897
1041	C6XZP3	C6XZP3 PEDHD	Bacteria	Phep_2535	Pedobacter heparinus (strain ATCC 13125 / DSM 2366 / NCIB 9290	900
1042	C6YK50	C6YK50 VIBCH	Bacteria	VchoM_02930	Vibrio cholerae MO10	860
1043	C6YQ62	C6YQ62 FRATT	Bacteria	FTMG_00210	Francisella tularensis subsp. tularensis MA00-2987	865
1044	C6YVH7	C6YVH7_9GAMM	Bacteria	FTPG_00281	Francisella philomiragia subsp. philomiragia ATCC 25015	865
1045	C6Z4P6	C6Z4P6 9BACE	Bacteria	BSFG_02057	Bacteroides sp. 4_3_47FAA	872
1046	C7BHV7	C7BHV7 PHOAA	Bacteria	PAU_03211	Photobacterium asiaticum subsp. asiaticum (strain ATCC 43949 /	876
1047	C7C771	C7C771 METED	Bacteria	alaS METDI3331	Methylobacterium extorquens (strain DSM 5838 / DM4) (Methyloba	891
1048	C7CT65	C7CT65 ENTFA	Bacteria	EFAG_01137	Enterococcus faecalis T1	880
1049	C7D3W1	C7D3W1_ENTFA	Bacteria	EFBG_01194	Enterococcus faecalis T2	880
1050	C7DF87	C7DF87_9RHOB	Bacteria	alaS TR2A62_0533	Thalassiosira sp. R2A62	884
1051	C7G834	C7G834_9FIRM	Bacteria	ROSINTL182_06058	Roseburia intestinalis L1-82	778
1052	C7GYM7	C7GYM7_9FIRM	Bacteria	GCWU000322_00156	Eubacterium saphenum ATCC 49989	878
1053	C7H6K7	C7H6K7_9FIRM	Bacteria	FAEPRAA2165_01940	Faecalibacterium prausnitzii A2-165	886
1054	C7HU17	C7HU17_9FIRM	Bacteria	alaS HMPREF078_0768	Anaerococcus vaginalis ATCC 51170	870
1055	C7INA1	C7INA1_9CLOT	Bacteria	CpapDRAFT_4184	Clostridium papyrosolvens DSM 2782	879
1056	C7IVH6	C7IVH6_THET	Bacteria	TeCCSD1DRAFT_2287	Thermoanaerobacter ethanolicus CCSD1	757
1057	C7LCF1	C7LCF1_BRUMC	Bacteria	alaS BMI_I1212	Brucella microti (strain CCM 4915)	885
1058	C7LXM0	C7LXM0_DESBD	Bacteria	Dbac_3181	Desulfomicrobium baculatum (strain DSM 4028 / VKM B-1378) (De	879
1059	C7LYT2	C7LYT2_ACIFD	Bacteria	Afer_0951	Acidimicrobium ferrooxidans (strain DSM 10331 / JCM 15462 / NBR	854
1060	C7M4Z2	C7M4Z2_CAPOD	Bacteria	Coch_0127	Capnocytophaga ochracea (strain ATCC 27872 / DSM 7271 / JCM 1	877
1061	C7MD05	C7MD05_BRAFD	Bacteria	Bfae_16360	Brachyobacterium faecium (strain ATCC 43885 / DSM 4810 / NCIB 9	902
1062	C7MMU1	C7MMU1_CRVCD	Bacteria	Ccur_05100	Cryptobacterium curtum (strain ATCC 700683 / DSM 15641 / 12-3)	878
1063	C7MSG4	C7MSG4_SACVD	Bacteria	Svir_15270	Saccharomonospora viridis (strain ATCC 15386 / DSM 43017 / JCM	888
1064	C7N4K1	C7N4K1_SLAH	Bacteria	Shel_07800	Slackia heliotrinireducens (strain ATCC 29202 / DSM 20476 / NCTC	889
1065	C7NC39	C7NC39_LEPBD	Bacteria	Lebu_1855	Leptotrichia buccalis (strain ATCC 14201 / DSM 1135 / JCM 12969)	871
1066	C7NHC6	C7NHC6_KYTSD	Bacteria	Ksed_12510	Kytococcus sedentarius (strain ATCC 14392 / DSM 20547 / CCM 31	893
1067	C7PFW1	C7PFW1_CHIPD	Bacteria	Cpin_0446	Chitinophaga pinensis (strain ATCC 43595 / DSM 2588 / NCIB 118C	871
1068	C7PVQ4	C7PVQ4_CATAD	Bacteria	Caci_2378	Catenulispora acidiphila (strain DSM 44928 / NRRL B-24433 / NBRC	889
1069	C7QR61	C7QR61_CYAP0	Bacteria	Cyan8802_1452	Cyanothece sp. (strain PCC 8802) (Synechococcus sp. (strain RF-2)	879
1070	C7R4F0	C7R4F0_JONDD	Bacteria	Jden_1351	Jonesia denitrificans (strain ATCC 14870 / DSM 20603 / CIP 55134	895
1071	C7RC58	C7RC58_KANKD	Bacteria	Kkor_1438	Kangia koreensis (strain DSM 16069 / KCTC 12182 / SW-125)	875
1072	C7RHK3	C7RHK3_ANAPD	Bacteria	Apr_0936	Anaerococcus prevotii (strain ATCC 9321 / DSM 20548 / JCM 6508	870
1073	C7RMX6	C7RMX6_ACCPU	Bacteria	CAP2UW1_2047	Accumulibacter phosphatis (strain UW-1)	878
1074	C7TAL9	C7TAL9_LACRG	Bacteria	alaS LGG_00767	Lactobacillus rhamnosus (strain ATCC 53103 / GG)	881
1075	C7THB6	C7THB6_LACRL	Bacteria	alaS LC705_00761	Lactobacillus rhamnosus (strain Lc 705)	710
1076	C7U779	C7U779_ENTFA	Bacteria	EFCG_00321	Enterococcus faecalis T3	880
1077	C7UGE4	C7UGE4_ENTFA	Bacteria	EFDG_00387	Enterococcus faecalis ATCC 4200	880
1078	C7UQ97	C7UQ97_ENTFA	Bacteria	EFOG_01173	Enterococcus faecalis X98	880
1079	C7UVB3	C7UVB3_ENTFA	Bacteria	EFLG_00447	Enterococcus faecalis D6	880
1080	C7V5D0	C7V5D0_ENTFA	Bacteria	EFMG_00304	Enterococcus faecalis T11	880
1081	C7VCC9	C7VCC9_ENTFA	Bacteria	EFNG_00308	Enterococcus faecalis CH188	880
1082	C7VNP5	C7VNP5_ENTFA	Bacteria	EFHG_00530	Enterococcus faecalis HIP11704	880
1083	C7VW99	C7VW99_ENTFA	Bacteria	EFKG_01156	Enterococcus faecalis Fly1	880
1084	C7W2W6	C7W2W6_ENTFA	Bacteria	EFJG_01096	Enterococcus faecalis E1Sol	880
1085	C7W9Z5	C7W9Z5_ENTFA	Bacteria	EFIG_00167	Enterococcus faecalis JH1	880
1086	C7WKE0	C7WKE0_ENTFA	Bacteria	EFEG_00322	Enterococcus faecalis DS5	880
1087	C7WNU9	C7WNU9_ENTFA	Bacteria	EFFG_00931	Enterococcus faecalis ARO1/DG	880
1088	C7X283	C7X283_ENTFA	Bacteria	EFGG_01114	Enterococcus faecalis Merz96	880
1089	C7XDG7	C7XDG7_9PORP	Bacteria	HMPREF0619_03509	Parabacteroides sp. D13	873
1090	C7XLK6	C7XLK6_9LACO	Bacteria	HMPREF5045_01854	Lactobacillus crispatus 125-2-CHN	879
1091	C7XMG2	C7XMG2_9FUSO	Bacteria	HMPREF0946_00182	Fusobacterium sp. 3_1_36A2	867
1092	C7XWJ9	C7XWJ9_9LACO	Bacteria	HMPREF0501_01002	Lactobacillus coleohominis 101-4-CHN	883
1093	C7Y1U7	C7Y1U7_9LACO	Bacteria	HMPREF0525_01404	Lactobacillus jensenii 27-2-CHN	878
1094	C7Y3Q5	C7Y3Q5_9LACO	Bacteria	HMPREF0507_00433	Lactobacillus crispatus MV-1A-US	879
1095	C7YA54	C7YA54_ENTFA	Bacteria	EFYG_00309	Enterococcus faecalis T8	880
1096	C7ZXK4	C7ZXK4_STAAU	Bacteria	SAAG_01532	Staphylococcus aureus subsp. aureus 55/2053	876
1097	C8A4M4	C8A4M4_STAAU	Bacteria	SABG_01617	Staphylococcus aureus subsp. aureus 65-1322	876
1098	C8ACK7	C8ACK7_STAAU	Bacteria	SACG_02505	Staphylococcus aureus subsp. aureus 68-397	876
1099	C8AIU2	C8AIU2_STAAU	Bacteria	SADG_01652	Staphylococcus aureus subsp. aureus E1410	876
1100	C8ASM3	C8ASM3_STAAU	Bacteria	SAEG_02013	Staphylococcus aureus subsp. aureus M876	876
1101	C8JU25	C8JU25_LISMO	Bacteria	LMIG_00964	Listeria monocytogenes FSL N3-165	879
1102	C8K027	C8K027_LISMO	Bacteria	LMJG_00413	Listeria monocytogenes FSL R2-503	879
1103	C8K8Y7	C8K8Y7_LISMO	Bacteria	LMMG_00469	Listeria monocytogenes F6900	879
1104	C8KJ75	C8KJ75_STAAU	Bacteria	alaS SA930_1704	Staphylococcus aureus 930918-3	876
1105	C8KRD0	C8KRD0_STAAU	Bacteria	alaS SAD30_1009	Staphylococcus aureus D30	876
1106	C8KZ86	C8KZ86_9PAST	Bacteria	alaS AM202_02795	Actinobacillus minor 202	874
1107	C8L138	C8L138_STAAU	Bacteria	SAFL_01997	Staphylococcus aureus A5937	876
1108	C8L825	C8L825_STAAU	Bacteria	SAGG_01462	Staphylococcus aureus A5948	876
1109	C8LIM8	C8LIM8_STAAU	Bacteria	SAHG_01340	Staphylococcus aureus A6224	876
1110	C8LTT5	C8LTT5_STAAU	Bacteria	SAIG_01179	Staphylococcus aureus A6300	876
1111	C8M026	C8M026_STAAU	Bacteria	SAJG_00452	Staphylococcus aureus A8115	876

1112	C8M7V4	C8M7V4 STAAU	Bacteria	SAKG_00324	Staphylococcus aureus A9299	876
1113	C8MF89	C8MF89 STAAU	Bacteria	SALG_00297	Staphylococcus aureus A9635	877
1114	C8MJR0	C8MJR0 STAAU	Bacteria	SAMG_01527	Staphylococcus aureus A9719	876
1115	C8MUP5	C8MUP5 STAAU	Bacteria	SANG_01239	Staphylococcus aureus A9763	876
1116	C8N064	C8N064 STAAU	Bacteria	SAOG_01459	Staphylococcus aureus A9781	876
1117	C8N9W4	C8N9W4_9GAMM	Bacteria	alaS HMPREF0198_1292	Cardiobacterium hominis ATCC 15826	876
1118	C8NE18	C8NE18_9LACT	Bacteria	alaS HMPREF0444_0163	Granulicatella adiacens ATCC 49175	914
1119	C8NP57	C8NP57_COREF	Bacteria	alaS HMPREF0290_1782	Corynebacterium efficiens YS-314	906
1120	C8P766	C8P766_9LACO	Bacteria	alaS HMPREF0494_1160	Lactobacillus antri DSM 16041	886
1121	C8PCJ4	C8PCJ4_9LACO	Bacteria	alaS HMPREF0520_0814	Lactobacillus iners DSM 13335	906
1122	C8PMR5	C8PMR5_9SPIO	Bacteria	alaS TREVI0001_0684	Treponema vincentii ATCC 35580	600
1123	C8PWG2	C8PWG2_9GAMM	Bacteria	alaS ENHAE0001_2116	Enhydrobacter aerosaccus SK60	890
1124	C8RTE4	C8RTE4_CORJE	Bacteria	alaS HMPREF0297_1296	Corynebacterium jeikeium ATCC 43734	887
1125	C8RXV1	C8RXV1_9RHOB	Bacteria	Rsw2DRAFT_0629	Rhodobacter sp. SW2	882
1126	C8SI79	C8SI79_9RHIZ	Bacteria	MesopDRAFT_1744	Mesorhizobium opportunistum WSM2075	888
1127	C8T8V3	C8T8V3_KLEPR	Bacteria	alaS HMPREF0484_4046	Klebsiella pneumoniae subsp. rhinoscleromatis ATCC 13884	875
1128	C8TFT9	C8TFT9_ECO26	Bacteria	alaS ECO26_3760	Escherichia coli O26:H11 (strain 11368 / EHEC)	876
1129	C8U9C4	C8U9C4_ECO10	Bacteria	alaS ECO103_3232	Escherichia coli O103:H2 (strain 12009 / EHEC)	876
1130	C8UEP9	C8UEP9_ECO1A	Bacteria	alaS ECO111_3415	Escherichia coli O111:H- (strain 11128 / EHEC)	876
1131	C8USB7	C8USB7_LACRG	Bacteria	LRHM_0744	Lactobacillus rhamnosus (strain ATCC 53103 / GG)	912
1132	C8VZV4	C8VZV4_DESAS	Bacteria	Dtox_2268	Desulfotomaculum acetoxidans (strain ATCC 49208 / DSM 771 / VK	878
1133	C8W9V0	C8W9V0_ATOPD	Bacteria	Apar_0457	Atopobium parvulum (strain ATCC 33793 / DSM 20469 / JCM 1030)	881
1134	C8WBA9	C8WBA9_ZYMMN	Bacteria	Za10_0445	Zymomonas mobilis subsp. mobilis (strain NCIB 11163)	890
1135	C8WLP7	C8WLP7_EGGLE	Bacteria	Elen_2555	Eggerthella lenta (strain ATCC 25559 / DSM 2243 / JCM 9979 / NC	878
1136	C8WQ93	C8WQ93_ALIAD	Bacteria	Aaci_2026	Alicyclobacillus acidocaldarius subsp. acidocaldarius (strain ATCC 27	879
1137	C8WZY8	C8WZY8_DESRD	Bacteria	Dret_0311	Desulfohalobium retbaense (strain DSM 5692)	880
1138	C8XD24	C8XD24_NAKMY	Bacteria	Namu_3297	Nakamurella multipartita (strain ATCC 700099 / DSM 44233 / JCM	891
1139	C8ZW28	C8ZW28_ENTGA	Bacteria	EGBG_00989	Enterococcus gallinarum EG2	880
1140	C9A8C5	C9A8C5_ENTCA	Bacteria	ECBG_01005	Enterococcus casseliflavus EC20	880
1141	C9AEU3	C9AEU3_ENTFC	Bacteria	EFVG_00946	Enterococcus faecium Com12	880
1142	C9ANL7	C9ANL7_ENTFC	Bacteria	EFWG_00969	Enterococcus faecium Com15	880
1143	C9AWG1	C9AWG1_ENTCA	Bacteria	EGAG_00989	Enterococcus casseliflavus EC30	880
1144	C9B5S0	C9B5S0_ENTFC	Bacteria	EFRG_00965	Enterococcus faecium 1,231,501	880
1145	C9BBZ6	C9BBZ6_ENTFC	Bacteria	EFSG_01049	Enterococcus faecium 1,141,733	880
1146	C9BJ78	C9BJ78_ENTFC	Bacteria	EFQG_00138	Enterococcus faecium 1,231,502	880
1147	C9BST1	C9BST1_ENTFC	Bacteria	EFUG_00311	Enterococcus faecium 1,231,408	819
1148	C9C158	C9C158_ENTFC	Bacteria	EFTG_00355	Enterococcus faecium 1,231,410	880
1149	C9C9D5	C9C9D5_ENTFC	Bacteria	FFPG_00301	Enterococcus faecium 1,230,933	880
1150	C9CJT1	C9CJT1_ENTCA	Bacteria	ECAG_00995	Enterococcus casseliflavus EC10	880
1151	C9D4H7	C9D4H7_9RHOB	Bacteria	alaS SCH4B_4703	Silicibacter sp. TrichCH4B	903
1152	C9KKZ3	C9KKZ3_9FIRM	Bacteria	MITSMUL_03844	Mitsuokella multacida DSM 20544	871
1153	C9KSR4	C9KSR4_9BACE	Bacteria	BACFIN_05347	Bacteroides finegoldii DSM 17565	872
1154	C9L6A1	C9L6A1_RUMHA	Bacteria	BLAHAN_04908	Blautia hansenii DSM 20583	892
1155	C9LJS4	C9LJS4_9BACT	Bacteria	GCWU000325_02488	Prevotella tannerae ATCC 51259	874
1156	C9LLS2	C9LLS2_9FIRM	Bacteria	GCWU000321_00453	Dialister invisus DSM 15470	868
1157	C9LTR4	C9LTR4_9FIRM	Bacteria	SELSPUOL_01075	Selenomonas sputigena ATCC 35185	871
1158	C9M3L7	C9M3L7_LACHE	Bacteria	alaS HMPREF0518_1623	Lactobacillus helveticus DSM 20075	879
1159	C9M534	C9M534_9BACT	Bacteria	GCWU000246_00061	Jonquetella anthropi E3_33_E1	879
1160	C9MAC2	C9MAC2_HAEIF	Bacteria	HIAG_00065	Haemophilus influenzae NT127	874
1161	C9MFK7	C9MFK7_HAEIF	Bacteria	HICG_00091	Haemophilus influenzae RdAW	874
1162	C9MM97	C9MM97_9BACT	Bacteria	HMPREF0973_00727	Prevotella veroralis F0319	888
1163	C9N1E8	C9N1E8_9FUSO	Bacteria	GCWU000323_02669	Leptotrichia hofstadii F0254	871
1164	C9P2H7	C9P2H7_VIBME	Bacteria	VIB_002005	Vibrio metschnikovii CIP 69.14	860
1165	C9P9I4	C9P9I4_VIBFU	Bacteria	VFA_000249	Vibrio furnissii CIP 102972	860
1166	C9PNY8	C9PNY8_9PAST	Bacteria	alaS HMPREF0621_0720	Pasteurella dagmatis ATCC 43325	874
1167	C9PXZ4	C9PXZ4_9BACT	Bacteria	alaS HMPREF6745_1817	Prevotella sp. oral taxon 472 str. F0295	873
1168	C9Q2M5	C9Q2M5_9VIBR	Bacteria	VCJ_000361	Vibrio sp. RC341	860
1169	C9QMF6	C9QMF6_VIBOR	Bacteria	VIA_003974	Vibrio orientalis CIP 102891	860
1170	C9R0V2	C9R0V2_ECOD1	Bacteria	alaS EcdH1_0992_ECDH1M	Escherichia coli (strain ATCC 33849 / DSM 4235 / NCIB 12045 / K1	876
1171	C9R2M1	C9R2M1_AGGAD	Bacteria	D11S_0655	Aggregatibacter actinomycetemcomitans serotype C (strain D11S-1	874
1172	C9R8B1	C9R8B1_AMMDK	Bacteria	Adeg_1440	Ammonifex degensii (strain DSM 10501 / KC4)	874
1173	C9RPI0	C9RPI0_FIBSS	Bacteria	Fisuc_1039	Fibrobacter succinogenes (strain ATCC 19169 / S85)	882
1174	C9RUS5	C9RUS5_GEOSY	Bacteria	GYMC61_0962	Geobacillus sp. (strain Y412MC61)	878
1175	C9T6T2	C9T6T2_9RHIZ	Bacteria	BAIG_02617	Brucella ceti M644/93/1	885
1176	C9TH51	C9TH51_9RHIZ	Bacteria	BAJG_02993	Brucella ceti M13/05/1	723
1177	C9TLC7	C9TLC7_9RHIZ	Bacteria	BAGG_01238	Brucella pinnipedialis M163/99/10	885
1178	C9TWB9	C9TWB9_9RHIZ	Bacteria	BAHG_01483	Brucella pinnipedialis B2/94	885
1179	C9U439	C9U439_BRUAB	Bacteria	BAAG_02609	Brucella abortus bv. 6 str. 870	885
1180	C9UD40	C9UD40_BRUAB	Bacteria	BABG_02604	Brucella abortus bv. 4 str. 292	885
1181	C9UML5	C9UML5_BRUAB	Bacteria	BACG_02630	Brucella abortus bv. 3 str. Tulya	885
1182	C9UYM2	C9UYM2_BRUAB	Bacteria	BADG_01493	Brucella abortus bv. 2 str. 86/8/59	885
1183	C9VB04	C9VB04_BRUNE	Bacteria	BANG_01477	Brucella neotomae 5K33	885
1184	C9VKG5	C9VKG5_9RHIZ	Bacteria	BAQG_01445	Brucella ceti B1/94	885
1185	C9VTS8	C9VTS8_BRUAB	Bacteria	BARG_02569	Brucella abortus bv. 9 str. C68	885
1186	C9WYC3	C9WYC3_NEIM8	Bacteria	alaS NMV_0785	Neisseria meningitidis serogroup C (strain 8013)	874
1187	C9XEL3	C9XEL3_SALTD	Bacteria	STMMW_27891	Salmonella typhimurium (strain D23580)	876
1188	C9XP11	C9XP11_CLODC	Bacteria	alaS CD196_1144	Clostridium difficile (strain CD196)	879



1189	C9XYZ2	C9XYZ2 CROTZ	Bacteria	alaS Ctu_32920	<i>Cronobacter turicensis</i> (strain DSM 18703 / LMG 23827 / z3032)	875
1190	C9YFV4	C9YFV4 9BURK	Bacteria	alaS Csp_B16540	<i>Curvibacter putative symbiont of Hydra magnipapillata</i>	878
1191	C9YKM0	C9YKM0 CLODR	Bacteria	alaS CDR20291_1122	<i>Clostridium difficile</i> (strain R20291)	879
1192	C9Z659	C9Z659 STRSW	Bacteria	alaS SCAB_75061	<i>Streptomyces scabies</i> (strain 87.22) ( <i>Streptomyces scabiei</i> )	890
1193	D0AF66	D0AF66_ENTFC	Bacteria	EFZG_00312	<i>Enterococcus faecium</i> TC 6	880
1194	D0AMR1	D0AMR1_ENTFC	Bacteria	EFXG_00692	<i>Enterococcus faecium</i> C68	880
1195	D0AZZ2	D0AZZ2 BRUAB	Bacteria	BAUG_2457	<i>Brucella abortus</i> NCTC 8038	885
1196	D0B952	D0B952 BRUME	Bacteria	BAWG_2760	<i>Brucella melitensis</i> bv. 1 str. 16M	885
1197	D0BAU5	D0BAU5 BRUSU	Bacteria	BAVG_0386	<i>Brucella suis</i> bv. 4 str. 40	885
1198	D0BKS3	D0BKS3_9LACT	Bacteria	HMPREF0446_00558	<i>Granulicatella elegans</i> ATCC 700633	881
1199	D0BPQ3	D0BPQ3_9FUSO	Bacteria	HMPREF0406_00237	<i>Fusobacterium</i> sp. 3_1_33	867
1200	D0BYI1	D0BYI1_9GAMM	Bacteria	HMPREF0014_01192	<i>Acinetobacter</i> sp. RUH2624	883
1201	D0CEF9	D0CEF9_ACIBA	Bacteria	HMPREF0010_03139	<i>Acinetobacter baumannii</i> ATCC 19606	883
1202	D0CN13	D0CN13_9SYNE	Bacteria	alaS SH8109_0675	<i>Synechococcus</i> sp. WH 8109	889
1203	D0CQU3	D0CQU3_9RHOB	Bacteria	alaS SL1157_2904	<i>Silicibacter lacuscaerulensis</i> ITI-1157	890
1204	D0D3B3	D0D3B3_9RHOB	Bacteria	alaS CSE45_2155	<i>Citricella</i> sp. SE45	906
1205	D0DJN6	D0DJN6_9LACO	Bacteria	HMPREF0508_01835	<i>Lactobacillus crispatus</i> MV-3A-US	879
1206	D0DQ41	D0DQ41_9LACO	Bacteria	HMPREF0527_01410	<i>Lactobacillus jensenii</i> SJ-7A-US	878
1207	D0DUR1	D0DUR1_LACFE	Bacteria	HMPREF0513_01400	<i>Lactobacillus fermentum</i> 28-3-CHN	882
1208	D0DZN4	D0DZN4_9LACO	Bacteria	HMPREF0974_01243	<i>Lactobacillus jensenii</i> 115-3-CHN	878
1209	D0FV78	D0FV78_ERWPY	Bacteria	alaS EpC_27920	<i>Erwinia pyrifoliae</i>	876
1210	D0GEU3	D0GEU3_BRUME	Bacteria	BASG_01297	<i>Brucella melitensis</i> bv. 2 str. 63/9	885
1211	D0GKX1	D0GKX1_9FUSO	Bacteria	alaS HMPREF0554_0459	<i>Leptotrichia goodfellowii</i> F0264	870
1212	D0GTI8	D0GTI8_VIBMI	Bacteria	VII_003196	<i>Vibrio mimicus</i> MB451	860
1213	D0H9A9	D0H9A9_VIBCH	Bacteria	VIJ_003114	<i>Vibrio cholerae</i> RC27	860
1214	D0HXB5	D0HXB5_VIBMI	Bacteria	VMA_000468	<i>Vibrio mimicus</i> VM223	860
1215	D0HKI0	D0HKI0_VIBCH	Bacteria	VIG_000218	<i>Vibrio cholerae</i> INDRE 91/1	873
1216	D0HUI5	D0HUI5_VIBCH	Bacteria	VIH_000019	<i>Vibrio cholerae</i> CT 5369-93	781
1217	D0I4I5	D0I4I5_VIBHO	Bacteria	VHA_000650	<i>Grimontia hollisae</i> CIP 101886	860
1218	D0IDL7	D0IDL7_9VIBR	Bacteria	VOA_003300	<i>Vibrio</i> sp. RC586	860
1219	D0IWI7	D0IWI7_COMT2	Bacteria	CtCNB1_2400	<i>Comamonas testosteroni</i> (strain CNB-2)	834
1220	D0J8K8	D0J8K8_BLASP	Bacteria	alaS BPLAN_043	<i>Blattabacterium</i> sp. subsp. <i>Periplaneta americana</i> (strain BPLAN) (F	887
1221	D0JBR0	D0JBR0_BLASB	Bacteria	alaS BLBBGE_598	<i>Blattabacterium</i> sp. subsp. <i>Blattella germanica</i> (strain Bge) (Blattel	887
1222	D0JGM7	D0JGM7_YERPD	Bacteria	alaS YPD4_2895	<i>Yersinia pestis</i> (strain D106004)	847
1223	D0JR37	D0JR37_YERP1	Bacteria	alaS YPD8_2891	<i>Yersinia pestis</i> (strain D182038)	847
1224	D0K5J7	D0K5J7_STAAD	Bacteria	alaS SAAV_1610	<i>Staphylococcus aureus</i> (strain ED98)	876
1225	D0KJ89	D0KJ89_PECWW	Bacteria	Pecwa_1116	<i>Pectobacterium wasabiae</i> (strain WPP163)	875
1226	D0KXP7	D0KXP7_HALNC	Bacteria	Hneap_0357	<i>Halothiobacillus neapolitanus</i> (strain ATCC 23641 / c2) ( <i>Thiobacillus</i>	872
1227	D0LCP4	D0LCP4_GORB4	Bacteria	Gbro_2320	<i>Gordonia bronchialis</i> (strain ATCC 25592 / DSM 43247 / JCM 3198)	900
1228	D0MIY9	D0MIY9_RHOM4	Bacteria	Rmar_1560	<i>Rhodothermus marinus</i> (strain ATCC 43812 / DSM 4252 / R-10) (R)	953
1229	D0PDG3	D0PDG3_BRUSU	Bacteria	BAEG_01495	<i>Brucella suis</i> bv. 5 str. 513	885
1230	D0PKS1	D0PKS1_BRUSU	Bacteria	BAFG_02600	<i>Brucella suis</i> bv. 3 str. 686	885
1231	D0R2G4	D0R2G4_LACJF	Bacteria	alaS F19785_490	<i>Lactobacillus johnsonii</i> (strain F19785)	882
1232	D0RJA7	D0RJA7_9RHIZ	Bacteria	BATG_02591	<i>Brucella</i> sp. F5/99	885
1233	D0RJP5	D0RJP5_9RICK	Bacteria	alaS HIMB114_0833	<i>Alpha proteobacterium</i> HIMB114	892
1234	D0RW46	D0RW46_9STRE	Bacteria	HMPREF0847_01517	<i>Streptococcus</i> sp. 2_1_36FAA	872
1235	D0RZQ5	D0RZQ5_ACICA	Bacteria	HMPREF0012_01657	<i>Acinetobacter calcoaceticus</i> RUH2202	883
1236	D0SC45	D0SC45_ACIOJ	Bacteria	HMPREF0016_01418	<i>Acinetobacter johnsonii</i> SH046	892
1237	D0SMN5	D0SMN5_ACIIJ	Bacteria	HMPREF0026_00568	<i>Acinetobacter junii</i> SH205	884
1238	D0STI2	D0STI2_ACILW	Bacteria	HMPREF0017_00606	<i>Acinetobacter lwoffii</i> SH145	892
1239	D0T247	D0T247_ACIRA	Bacteria	HMPREF0018_00487	<i>Acinetobacter radioresistens</i> SH164	897
1240	D0TFI7	D0TFI7_9BACE	Bacteria	HMPREF0103_3080	<i>Bacteroides</i> sp. 2_1_33B	873
1241	D0TUL0	D0TUL0_9BACE	Bacteria	HMPREF0102_03260	<i>Bacteroides</i> sp. 2_1_22	873
1242	D0W5E7	D0W5E7_NEICI	Bacteria	NEICINOT_04910	<i>Neisseria cinerea</i> ATCC 14685	874
1243	D0WA21	D0WA21_NEILA	Bacteria	NEILACOT_04387	<i>Neisseria lactamica</i> ATCC 23970	885
1244	D0WG12	D0WG12_9ACTN	Bacteria	HMPREF0762_00762	<i>Slackia exigua</i> ATCC 700122	901
1245	D0WN09	D0WN09_9ACTO	Bacteria	HMPREF0972_01174	<i>Actinomyces</i> sp. oral taxon 848 str. F0332	888
1246	D0WUF8	D0WUF8_VIBAL	Bacteria	alaS VMC_08080	<i>Vibrio alginolyticus</i> 40B	860
1247	D0X7S6	D0X7S6_VIBHA	Bacteria	alaS VME_11390	<i>Vibrio harveyi</i> 1DA3	860
1248	D0YST7	D0YST7_9ACTO	Bacteria	alaS HMPREF0578_2262	<i>Mobiluncus mulieris</i> 28-1	894
1249	D0YW36	D0YW36_LISDA	Bacteria	VDA_001299	<i>Photobacterium damsela</i> subsp. <i>damsela</i> CIP 102761	873
1250	D0ZDR3	D0ZDR3_EDWTE	Bacteria	alaS ETAE_2859	<i>Edwardsiella tarda</i> (strain EIB202)	875
1251	D0ZUV1	D0ZUV1_SALT1	Bacteria	alaS STM14_3413	<i>Salmonella typhimurium</i> (strain 14028s / SGSC 2262)	876
1252	D0ZZE3	D0ZZE3_CHLPP	Bacteria	alaS CPK_ORF00303	<i>Chlamydomonas pneumoniae</i> (strain LPCoLN)	872
1253	D1AEX6	D1AEX6_THECD	Bacteria	Tcur_2135	<i>Thermomonospora curvata</i> (strain ATCC 19995 / DSM 43183 / JCM	889
1254	D1AAML1	D1AAML1_SEBTE	Bacteria	Sterm_2740	<i>Sebadella termitida</i> (strain ATCC 33386 / NCTC 11300)	870
1255	D1AST8	D1AST8_ANACI	Bacteria	alaS ACIS_01064	<i>Anaplasma centrale</i> (strain Israel) ( <i>Anaplasma marginale</i> subsp. ce	882
1256	D1AX74	D1AX74_STRM9	Bacteria	Smon_0418	<i>Streptobacillus moniliformis</i> (strain ATCC 14647 / DSM 12112 / NC	865
1257	D1B5H4	D1B5H4_THEAS	Bacteria	Taci_1033	<i>Thermanaerovibrio acidaminovorans</i> (strain ATCC 49978 / DSM 658	882
1258	D1BGX6	D1BGX6_SANKS	Bacteria	Sked_17690	<i>Sanguibacter keddiei</i> (strain ATCC 51767 / DSM 10542 / NCFB 302	895
1259	D1BNA4	D1BNA4_VEIPT	Bacteria	Vpar_1181	<i>Veillonella parvula</i> (strain ATCC 10790 / DSM 2008 / JCM 12972 / T	871
1260	D1BSM0	D1BSM0_XYLCX	Bacteria	Xcel_1689	<i>Xylanimonas cellulositytica</i> (strain DSM 15894 / CECT 5975 / LMG 2	895
1261	D1C426	D1C426_SPHTD	Bacteria	Sthe_1558	<i>Sphaerobacter thermophilus</i> (strain DSM 20745 / S 6022)	879
1262	D1CDK5	D1CDK5_THET1	Bacteria	Tter_0089	<i>Thermobaculum terrenum</i> (strain ATCC BAA-798 / YNP1)	879
1263	D1CYF7	D1CYF7_9RHIZ	Bacteria	BAKG_00587	<i>Brucella</i> sp. 83/13	885
1264	D1D3Z8	D1D3Z8_NEIGO	Bacteria	NGBG_00469	<i>Neisseria gonorrhoeae</i> 35/02	881
1265	D1D8N4	D1D8N4_NEIGO	Bacteria	NGEG_01917	<i>Neisseria gonorrhoeae</i> FA19	881

1266	D1DJY5	D1DJY5 NEIGO	Bacteria	NGFG_02062	Neisseria gonorrhoeae MS11	874
1267	D1DRM8	D1DRM8 NEIGO	Bacteria	NGGG_01930	Neisseria gonorrhoeae PID18	874
1268	D1DTJ2	D1DTJ2 NEIGO	Bacteria	NGHG_01928	Neisseria gonorrhoeae PID1	874
1269	D1DZ84	D1DZ84 NEIGO	Bacteria	NGJG_01996	Neisseria gonorrhoeae PID332	874
1270	D1E727	D1E727 NEIGO	Bacteria	NGKG_00487	Neisseria gonorrhoeae SK-92-679	874
1271	D1EC18	D1EC18 NEIGO	Bacteria	NGLG_01945	Neisseria gonorrhoeae SK-93-1035	874
1272	D1EML8	D1EML8 9RHIZ	Bacteria	BALG_01443	Brucella pinnipedialis M292/94/1	885
1273	D1EW08	D1EW08 BRUME	Bacteria	BAMG_00877	Brucella melitensis bv. 1 str. Rev.1	885
1274	D1F986	D1F986 BRUME	Bacteria	BAOG_00887	Brucella melitensis bv. 3 str. Ether	885
1275	D1FG02	D1FG02 9RHIZ	Bacteria	BAPG_01450	Brucella ceti M490/95/1	885
1276	D1GMN2	D1GMN2 STAA0	Bacteria	alaS SATW20_16130	Staphylococcus aureus (strain TW20 / 0582)	877
1277	D1J7R8	D1J7R8 MYCHP	Bacteria	alaS MHO_1310	Mycoplasma hominis (strain ATCC 23114 / IFO 14850 / NCTC 1011)	887
1278	D1JRZ3	D1JRZ3 9BACE	Bacteria	HMPREF0101_02664	Bacteroides sp. 2_1_16	872
1279	D1K8X7	D1K8X7 9BACE	Bacteria	HMPREF0105_4069	Bacteroides sp. 3_1_33FAA	872
1280	D1NSA7	D1NSA7 9BIFI	Bacteria	BIFGAL_02663	Bifidobacterium gallicum DSM 20093	897
1281	D1P5U5	D1P5U5 9ENTR	Bacteria	PROVRUST_07608	Providencia rustigianii DSM 4541	875
1282	D1PB45	D1PB45 9BACT	Bacteria	PREVCOP_04421	Prevotella copri DSM 18205	887
1283	D1PKP3	D1PKP3 9FIRM	Bacteria	SUBVAR_04920	Subdoligranulum variabile DSM 15176	886
1284	D1PX65	D1PX65 9BACT	Bacteria	alaS HMPREF0645_1550	Prevotella bergensis DSM 17361	886
1285	D1Q6P0	D1Q6P0 STAAU	Bacteria	SAPG_00241	Staphylococcus aureus A9765	876
1286	D1QJ88	D1QJ88 STAAU	Bacteria	SAQG_01762	Staphylococcus aureus A10102	876
1287	D1QPE6	D1QPE6 9BACT	Bacteria	HMPREF0971_00836	Prevotella oris F0302	887
1288	D1QXV9	D1QXV9 STAAU	Bacteria	SGAG_00475	Staphylococcus aureus A8117	876
1289	D1R5V9	D1R5V9 9CHLA	Bacteria	pah_c014o045	Parachlamydia acanthamoebae str. Hall's coccus	876
1290	D1RG57	D1RG57 LEGLO	Bacteria	alaS LLB_0586	Legionella longbeachae D-4968	860
1291	D1SS50	D1SS50 9BURK	Bacteria	AcavDRAFT_0953	Acidovorax avenae subsp. avenae ATCC 19860	876
1292	D1TRE2	D1TRE2 YERPE	Bacteria	alaS YPD27_2917	Yersinia pestis KIM D27	875
1293	D1VUM1	D1VUM1 9FIRM	Bacteria	alaS HMPREF0628_0522	Peptoniphilus lacrimalis 315-B	874
1294	D1W041	D1W041 9BACT	Bacteria	alaS HMPREF9019_0030	Prevotella timonensis CRIS 5C-B1	875
1295	D1W600	D1W600 9BACT	Bacteria	alaS HMPREF0650_1587	Prevotella buccalis ATCC 35310	872
1296	D1WCF2	D1WCF2 9LACO	Bacteria	alaS HMPREF0886_2997	Lactobacillus jensenii 208-1	878
1297	D1WDE4	D1WDE4 9LACO	Bacteria	alaS HMPREF0886_0769	Lactobacillus jensenii 208-1	878
1298	D1WN13	D1WN13 STAPE	Bacteria	alaS HMPREF0797_1497	Staphylococcus epidermidis SK135	876
1299	D1X672	D1X672 9ACTO	Bacteria	SACT1DRAFT_5562	Streptomyces sp. ACT-1	889
1300	D1XT04	D1XT04 9ACTO	Bacteria	SACTEDRAFT_5814	Streptomyces sp. ACTE	889
1301	D1XXK9	D1XXK9 9BACT	Bacteria	alaS HMPREF0648_1138	Prevotella bivia JCVIHP010	885
1302	D1Y3T5	D1Y3T5 9BACT	Bacteria	alaS HMPREF7215_0626	Pyramidobacter piscolens W5455	882
1303	D1YC72	D1YC72_PROAC	Bacteria	alaS HMPREF9206_1803	Propionibacterium acnes J139	892
1304	D1YJL6	D1YJL6 9LACO	Bacteria	alaS HMPREF9209_2105	Lactobacillus gasserii 224-1	882
1305	D1YS03	D1YS03 9FIRM	Bacteria	alaS HMPREF1035_1809	Veillonella parvula ATCC 17745	871
1306	D2AID9	D2AID9 SHIF2	Bacteria	alaS SFxv_2985	Shigella flexneri serotype X (strain 2002017)	876
1307	D2ANQ1	D2ANQ1 FRATE	Bacteria	NE061598_06315	Francisella tularensis subsp. tularensis (strain NE061598)	865
1308	D2AVH4	D2AVH4 STRRD	Bacteria	Sros_6094	Streptosporangium roseum (strain ATCC 12428 / DSM 43021 / JCM)	890
1309	D2BL14	D2BL14 LACLK	Bacteria	alaS LLKF_1895	Lactococcus lactis subsp. lactis (strain KF147)	872
1310	D2BUH2	D2BUH2 DICD5	Bacteria	Dd586_3184	Dickeya dadantii (strain Ech586)	875
1311	D2C435	D2C435 THENR	Bacteria	Tnap_1407	Thermotoga naphthophila (strain ATCC BAA-489 / DSM 13996 / JCI)	863
1312	D2EK39	D2EK39 PEDAC	Bacteria	HMPREF9024_01151	Pediococcus acidilactici 7_4	881
1313	D2EQD3	D2EQD3 9STRE	Bacteria	HMPREF0850_00192	Streptococcus sp. M143	872
1314	D2EV56	D2EV56 9BACE	Bacteria	HMPREF0969_01028	Bacteroides sp. D20	872
1315	D2F7P5	D2F7P5 STAAU	Bacteria	SARG_02266	Staphylococcus aureus subsp. aureus C101	876
1316	D2FDT7	D2FDT7 STAAU	Bacteria	SASG_00699	Staphylococcus aureus subsp. aureus C427	876
1317	D2FMF6	D2FMF6 STAAU	Bacteria	SATG_00380	Staphylococcus aureus subsp. aureus D139	876
1318	D2FVX3	D2FVX3 STAAU	Bacteria	SAWG_01633	Staphylococcus aureus subsp. aureus M899	876
1319	D2G2I6	D2G2I6 STAAU	Bacteria	SAXG_01256	Staphylococcus aureus subsp. aureus WBG10049	877
1320	D2G9T5	D2G9T5 STAAU	Bacteria	SAYG_00257	Staphylococcus aureus subsp. aureus WW2703/97	877
1321	D2GGX1	D2GGX1 STAAU	Bacteria	SDAG_01649	Staphylococcus aureus subsp. aureus Btn1260	876
1322	D2GS19	D2GS19 STAAU	Bacteria	SFAG_01650	Staphylococcus aureus subsp. aureus C160	876
1323	D2LAK8	D2LAK8 9DELTA	Bacteria	DFW101DRAFT_3721	Desulfovibrio sp. FW1012B	880
1324	D2MH69	D2MH69 9BACT	Bacteria	alaS POR_0018	Candidatus Poribacteria sp. WGA-A3	734
1325	D2MPX1	D2MPX1 9FIRM	Bacteria	alaS HMPREF9013_0361	Bulleidia extracta W1219	875
1326	D2N7V8	D2N7V8 STAA5	Bacteria	alaS SAPIG1682	Staphylococcus aureus (strain MRSA ST398 / isolate S0385)	877
1327	D2NLK6	D2NLK6 ECOS5	Bacteria	ECSF_2490	Escherichia coli O150:H5 (strain SE15)	876
1328	D2NT32	D2NT32 ROTMD	Bacteria	RMDY18_09760	Rothia mucilaginosa (strain DY-18) (Stomatococcus mucilaginosus)	895
1329	D2P2D3	D2P2D3 LISM1	Bacteria	alaS LM5578_1649	Listeria monocytogenes serotype 1/2a (strain 08-5578)	832
1330	D2P569	D2P569 LISM2	Bacteria	alaS LM5923_1601	Listeria monocytogenes serotype 1/2a (strain 08-5923)	832
1331	D2PVC5	D2PVC5 KRIFD	Bacteria	kfla_4372	Kribbella flavida (strain DSM 17836 / JCM 10339 / NBRC 14399)	889
1332	D2QA28	D2QA28 BIFDB	Bacteria	alaS BDP_1021	Bifidobacterium dentium (strain ATCC 27534 / DSM 20436 / JCM 1)	892
1333	D2QFM4	D2QFM4 SPILD	Bacteria	Slin_2378	Spirosoma linguale (strain ATCC 33905 / DSM 74 / LMG 10896)	890
1334	D2R9Z0	D2R9Z0 GARV4	Bacteria	alaS HMPREF0424_0375	Gardnerella vaginalis (strain 409-05)	894
1335	D2RJM7	D2RJM7 ACIFV	Bacteria	Acfer_0894	Acidaminococcus fermentans (strain ATCC 25085 / DSM 20731 / VF)	875
1336	D2S9G4	D2S9G4 GEOOG	Bacteria	Gobs_3158	Geodermatophilus obscurus (strain ATCC 25078 / DSM 43160 / JCM)	897
1337	D2T5I0	D2T5I0 ERWP6	Bacteria	alaS EPYR_03031	Erwinia pyrifoliae (strain DSM 12163 / CIP 106111 / Ep16/96)	876
1338	D2TLG1	D2TLG1 CITRI	Bacteria	alaS ROD_31171	Citrobacter rodentium (strain ICC168) (Citrobacter freundii biotype)	875
1339	D2U037	D2U037 9ENTR	Bacteria	alaS ARN_18400	Arsenophonus nasoniae (son-killer infecting Nasonia vitripennis)	899
1340	D2U8D7	D2U8D7 XANAP	Bacteria	alaS XALC_1173	Xanthomonas albilineans (strain GPE PC73 / CFBP 7063)	883
1341	D2UMP2	D2UMP2 STAAU	Bacteria	SAUG_01021	Staphylococcus aureus subsp. aureus H19	876
1342	D2USN5	D2USN5 STAAU	Bacteria	SHAG_01602	Staphylococcus aureus subsp. aureus A017934/97	876



1343	D2Y951	D2Y951 VIBMI	Bacteria	alaS VMB_00610	Vibrio mimicus VM603	858
1344	D2YUX8	D2YUX8 VIBMI	Bacteria	alaS VMD_35620	Vibrio mimicus VM573	860
1345	D2Z416	D2Z416_9BACT	Bacteria	Dpep_2255	Dethiosulfovibrio peptidovorans DSM 11002	878
1346	D2ZJG9	D2ZJG9_9ENTR	Bacteria	ENTCAN_08672	Enterobacter cancerogenus ATCC 35316	875
1347	D2ZVD6	D2ZVD6_NEIMU	Bacteria	NEIMUCOT_04579	Neisseria mucosa ATCC 25996	873
1348	D3ATJ8	D3ATJ8_9CLOT	Bacteria	CLOSTHATH_06957	Clostridium hathewayi DSM 13479	813
1349	D3CXI9	D3CXI9_9ACTO	Bacteria	FrEUN1FDRAFT_2259	Frankia sp. EUN1f	880
1350	D3DKE4	D3DKE4_HYDIT	Bacteria	alaS HTH_1852_Hydh_183	Hydrogenobacter thermophilus (strain DSM 6534 / IAM 12695 / TK	871
1351	D3ELL9	D3ELL9_GEOS4	Bacteria	GYMC10_1594	Geobacillus sp. (strain Y412MC10)	875
1352	D3EQ32	D3EQ32_UCYNA	Bacteria	UCYN_08980	Cyanobacterium UCYN-A	880
1353	D3EX14	D3EX14_STAA4	Bacteria	alaS SA2981_1576	Staphylococcus aureus (strain 04-02981)	876
1354	D3FCU1	D3FCU1_CONWI	Bacteria	Cwoe_3034	Conexibacter woesei (strain DSM 14684 / JCM 11494 / NBRC 1009	888
1355	D3FVZ4	D3FVZ4_BACPE	Bacteria	alaS BpOF4_11865	Bacillus pseudofirmus (strain OF4)	879
1356	D3GRM9	D3GRM9_ECO44	Bacteria	alaS EC042_2890	Escherichia coli O44:H18 (strain 042 / EAEC)	876
1357	D3H804	D3H804_STRM6	Bacteria	alaRS smi_0749	Streptococcus mitis (strain B6)	872
1358	D3HCB1	D3HCB1_STRG3	Bacteria	alaS GALLO_0674	Streptococcus gallolyticus (strain UCN34)	872
1359	D3HRE7	D3HRE7_LEGLN	Bacteria	alaS LLO_1119	Legionella longbeachae serogroup 1 (strain NSW150)	860
1360	D3HV47	D3HV47_9BACT	Bacteria	HMPREF0649_00129	Prevotella buccae D17	881
1361	D3I760	D3I760_9BACT	Bacteria	HMPREF0660_01725	Prevotella melaninogenica D18	887
1362	D3IEJ3	D3IEJ3_9BACT	Bacteria	HMPREF0669_01847	Prevotella sp. oral taxon 299 str. F0039	872
1363	D3IFI4	D3IFI4_9BACT	Bacteria	HMPREF0670_00103	Prevotella sp. oral taxon 317 str. F0108	872
1364	D3KPB5	D3KPB5_LISMO	Bacteria	LMFG_02141	Listeria monocytogenes FSL J2-071	879
1365	D3L233	D3L233_9BACT	Bacteria	HMPREF1705_00974	Anaerobaculum hydrogeliformans ATCC BAA-1850	880
1366	D3L9Y0	D3L9Y0_OENOE	Bacteria	AWRIB429_1160	Oenococcus oeni AWRIB429	885
1367	D3LGF6	D3LGF6_ENTFC	Bacteria	EDAG_01275	Enterococcus faecium D344SRF	880
1368	D3LQ63	D3LQ63_MICLU	Bacteria	alaS HMPREF0569_2433	Micrococcus luteus SK58	903
1369	D3LUB6	D3LUB6_9FIRM	Bacteria	alaS HMPREF0889_1310	Megasphaera genomsp. type 1 str. 28L	869
1370	D3M4U7	D3M4U7_9ACTO	Bacteria	FsymDgDRAFT_2689	Frankia symbiont of Datisca glomerata	894
1371	D3MG35	D3MG35_PROAC	Bacteria	alaS HMPREF9207_0689	Propionibacterium acnes J165	892
1372	D3ML07	D3ML07_PROAC	Bacteria	alaS HMPREF1034_0342	Propionibacterium acnes SK187	913
1373	D3MT50	D3MT50_9FIRM	Bacteria	alaS HMPREF0631_1070	Peptostreptococcus anaerobius 653-L	878
1374	D3P008	D3P008_AZOS1	Bacteria	alaS AZL_a04560	Azospirillum sp. (strain B510)	889
1375	D3PEA0	D3PEA0_DEFDS	Bacteria	alaS DEFDS_1463	Deferribacter desulfuricans (strain DSM 14783 / JCM 11476 / NBRC	871
1376	D3PPT2	D3PPT2_MEIRD	Bacteria	Mrub_2952	Meiothermus ruber (strain ATCC 35948 / DSM 1279 / VKM B-1258	883
1377	D3PYV0	D3PYV0_STANL	Bacteria	Snas_3878	Stackebrandtia nassauensis (strain DSM 44728 / NRRL B-16338 / N	885
1378	D3QCD9	D3QCD9_STALH	Bacteria	SLGD_01301	Staphylococcus lugdunensis (strain HKU09-01)	876
1379	D3QPP4	D3QPP4_ECOCB	Bacteria	alaS G2583_3345	Escherichia coli O55:H7 (strain CB9615 / EPEC)	876
1380	D3R347	D3R347_CLOB3	Bacteria	alaS HMPREF0868_1344	Clostridiales genomsp. BVAB3 (strain UPII9-5)	886
1381	D3R5D2	D3R5D2_BIFAB	Bacteria	BIF_00673	Bifidobacterium animalis subsp. lactis (strain BB-12)	899
1382	D3RJG7	D3RJG7_KLEVT	Bacteria	Kvar_1043	Klebsiella variicola (strain At-22)	875
1383	D3RRY5	D3RRY5_ALLVD	Bacteria	Alvin_1100	Allochromatium vinosum (strain ATCC 17899 / DSM 180 / NBRC 10	867
1384	D3SAQ6	D3SAQ6_THISK	Bacteria	TK90_1614	Thioalkalivibrio sp. (strain K90mix)	869
1385	D3SN45	D3SN45_THEAH	Bacteria	Thal_1546	Thermocrinis albus (strain DSM 14484 / JCM 11386 / HI 11/12)	864
1386	D3T8M6	D3T8M6_THEIA	Bacteria	Thit_1041	Thermoanaerobacter italicus (strain DSM 9252 / Ab9)	877
1387	D3UN87	D3UN87_LISSS	Bacteria	alaS lse_1419	Listeria seeligeri serovar 1/2b (strain ATCC 35967 / DSM 20751 / C	879
1388	D3UVL8	D3UVL8_CHLTS	Bacteria	alaS SW2_7611	Chlamydia trachomatis serovar E (strain Sweden2)	875
1389	D3V425	D3V425_XENBS	Bacteria	alaS XBj1_3286	Xenorhabdus bovienii (strain SS-2004)	887
1390	D3V9U5	D3V9U5_XENNA	Bacteria	alaS XNC1_1262	Xenorhabdus nematophila (strain ATCC 19061 / DSM 3370 / LMG 1	875
1391	D4BHE3	D4BHE3_9ENTR	Bacteria	CIT292_09950	Citrobacter youngae ATCC 29220	875
1392	D4BP77	D4BP77_BIFBR	Bacteria	BIFBRE_03885	Bifidobacterium breve DSM 20213	892
1393	D4C4M5	D4C4M5_PRORE	Bacteria	PROVRETT_09573	Providencia rettgeri DSM 1131	875
1394	D4CET7	D4CET7_9CLOT	Bacteria	CLOM621_07956	Clostridium sp. M62/1	868
1395	D4CQ26	D4CQ26_9FIRM	Bacteria	GCWU000341_02468	Oribacterium sp. oral taxon 078 str. F0262	882
1396	D4CU78	D4CU78_9FUSO	Bacteria	FUSPEROL_00952	Fusobacterium periodonticum ATCC 33693	867
1397	D4DQU4	D4DQU4_NEIEG	Bacteria	NEIELOOT_01435	Neisseria elongata subsp. glycolytica ATCC 29315	873
1398	D4DWX4	D4DWX4_SEROD	Bacteria	alaS HMPREF0758_0424	Serratia odorifera DSM 4582	875
1399	D4EDT4	D4EDT4_AGGAC	Bacteria	D7S_1042	Aggregatibacter actinomycetemcomitans D7S-1	874
1400	D4ELV7	D4ELV7_ENTFA	Bacteria	HMPREF9376_01630	Enterococcus faecalis S613	880
1401	D4ETS5	D4ETS5_ENTFA	Bacteria	HMPREF9377_00932	Enterococcus faecalis R712	880
1402	D4F1G4	D4F1G4_EDWTA	Bacteria	EDWATA_00554	Edwardsiella tarda ATCC 23685	875
1403	D4FG35	D4FG35_9LACO	Bacteria	alaS HMPREF0891_1183	Lactobacillus crispatus 214-1	879
1404	D4FIJ6	D4FIJ6_STAEP	Bacteria	alaS HMPREF0794_0384	Staphylococcus epidermidis M23864:W2(grey)	876
1405	D4FTQ4	D4FTQ4_STROR	Bacteria	alaS HMPREF8579_1535 S	Streptococcus oralis ATCC 35037	872
1406	D4FZE0	D4FZE0_BACNA	Bacteria	alaS BSNT_03977	Bacillus subtilis subsp. natto BEST195	878
1407	D4G9E5	D4G9E5_TREPC	Bacteria	TPChic_1017	Treponema pallidum subsp. pallidum (strain Chicago)	649
1408	D4GLE6	D4GLE6_PANAM	Bacteria	alaS PANA_3032	Pantoea ananatis (strain LMG 20103)	875
1409	D4H5Z1	D4H5Z1_DENA2	Bacteria	Dacet_0857	Denitrovibrio acetiphilus (strain DSM 12809 / N2460)	877
1410	D4HDY5	D4HDY5_PROAS	Bacteria	alaS HMPREF0675_4239	Propionibacterium acnes (strain SK137)	892
1411	D4HX66	D4HX66_ERWAC	Bacteria	alaS EAMY_0807	Erwinia amylovora (strain CFBP1430)	876
1412	D4I9E3	D4I9E3_ERWAE	Bacteria	alaS EAM_2638	Erwinia amylovora (strain ATCC 49946 / CCPPB 0273 / Ea273 / 27-	876
1413	D4IJD9	D4IJD9_9BACT	Bacteria	AL1_03870	Alistipes shahii WAL 8301	873
1414	D4IJM2	D4IJM2_BUTFI	Bacteria	CIY_15920	Butyrivibrio fibrisolvens 16/4	795
1415	D4J843	D4J843_9FIRM	Bacteria	CC1_17660	Coprococcus catus GD/7	880
1416	D4JER3	D4JER3_9FIRM	Bacteria	EC1_12120	Eubacterium cylindroides T2-87	875
1417	D4JNI3	D4JNI3_9FIRM	Bacteria	ERE_28380	Eubacterium rectale M104/1	886
1418	D4JSS8	D4JSS8_9FIRM	Bacteria	EUS_09260	Eubacterium siraeum 70/3	878
1419	D4JZP6	D4JZP6_9FIRM	Bacteria	FP2_21120	Faecalibacterium prausnitzii L2-6	886

1420	D4K887	D4K887_9FIRM	Bacteria	FPR_06680	Faecalibacterium prausnitzii SL3/3	886
1421	D4KEX4	D4KEX4_9FIRM	Bacteria	MHY_22930	Megamonas hypermegale ART12/1	637
1422	D4L6K8	D4L6K8_9FIRM	Bacteria	RBR_09230	Ruminococcus bromii L2-63	877
1423	D4LCC6	D4LCC6_9FIRM	Bacteria	RUM_11200	Ruminococcus sp. 18P13	883
1424	D4LGV1	D4LGV1_9FIRM	Bacteria	CK1_08150	Ruminococcus sp. SR1/5	880
1425	D4LSU1	D4LSU1_9FIRM	Bacteria	CK5_25460	Ruminococcus obeum A2-162	879
1426	D4M5L3	D4M5L3_9FIRM	Bacteria	RTO_19880	Ruminococcus torques L2-14	879
1427	D4M823	D4M823_9BACT	Bacteria	SY1_06490	Synergistetes bacterium SGP1	879
1428	D4MMH8	D4MMH8_9FIRM	Bacteria	ES1_20960	Eubacterium siraeum V10Sc8a	878
1429	D4PK12	D4PK12_LISMO	Bacteria	LMBG_00951	Listeria monocytogenes FSL J1-194	879
1430	D4PU09	D4PU09_LISMO	Bacteria	LMPG_01086	Listeria monocytogenes J2818	879
1431	D4Q1N1	D4Q1N1_LISMO	Bacteria	LMSG_00830	Listeria monocytogenes HPB2262	879
1432	D4QHN4	D4QHN4_ENTFC	Bacteria	EfmE980_0304	Enterococcus faecium E980	880
1433	D4QWT3	D4QWT3_ENTFC	Bacteria	EfmE1071_2384	Enterococcus faecium E1071	880
1434	D4QXU8	D4QXU8_ENTFC	Bacteria	EfmE1162_0035	Enterococcus faecium E1162	880
1435	D4RCQ7	D4RCQ7_ENTFC	Bacteria	EfmE1636_2626	Enterococcus faecium E1636	880
1436	D4RG06	D4RG06_ENTFC	Bacteria	EfmE1679_0759	Enterococcus faecium E1679	880
1437	D4RRV7	D4RRV7_ENTFC	Bacteria	EfmU0317_1628	Enterococcus faecium U0317	880
1438	D4S065	D4S065_9FIRM	Bacteria	BUTYVIB_01481	Butyrivibrio crossotus DSM 2876	884
1439	D4S8K2	D4S8K2_9FIRM	Bacteria	alaS_HMPREF7545_1867	Selenomonas noxia ATCC 43541	872
1440	D4SK82	D4SK82_ENTFC	Bacteria	EfmE1039_0847	Enterococcus faecium E1039	880
1441	D4SX88	D4SX88_9XANT	Bacteria	alaS_XAUB_27150	Xanthomonas fuscans subsp. aurantifolii str. ICPB 11122	882
1442	D4T5P9	D4T5P9_9XANT	Bacteria	alaS_XAUC_16480	Xanthomonas fuscans subsp. aurantifolii str. ICPB 10535	882
1443	D4TJI2	D4TJI2_9NOST	Bacteria	CRC_02571	Cylindrospermopsis raciborskii CS-505	878
1444	D4TPY3	D4TPY3_9NOST	Bacteria	CRD_01274	Raphidiopsis brookii D9	878
1445	D4U185	D4U185_9ACTO	Bacteria	HMPREF0970_01984	Actinomyces odontolyticus F0309	902
1446	D4U4H1	D4U4H1_STAAU	Bacteria	SKAG_00714	Staphylococcus aureus A9754	877
1447	D4UG09	D4UG09_STAAU	Bacteria	SMAG_01912	Staphylococcus aureus A8819	876
1448	D4UXA4	D4UXA4_ENTFA	Bacteria	alaS_CUI_1809	Enterococcus faecalis PC1.1	880
1449	D4VCA8	D4VCA8_BACVU	Bacteria	alaS_CUU_1450	Bacteroides vulgatus PC510	872
1450	D4VF49	D4VF49_9BACE	Bacteria	alaS_CW3_3120	Bacteroides xylanisolvens SD CC 1b	872
1451	D4VUY6	D4VUY6_ENTFC	Bacteria	alaS_CUO_1706	Enterococcus faecium PC4.1	880
1452	D4W1U2	D4W1U2_9FIRM	Bacteria	alaS_CUW_0487	Turicibacter sanguinis PC909	873
1453	D4WJB8	D4WJB8_BACOV	Bacteria	alaS_CUY_1096	Bacteroides ovatus SD CMC 3f	872
1454	D4WX58	D4WX58_BACOV	Bacteria	alaS_CW1_2681	Bacteroides ovatus SD CC 2a	872
1455	D4XAL0	D4XAL0_9BUCV	Bacteria	alaS_HMPREF0004_2507	Achromobacter piechaudii ATCC 43553	874
1456	D4XPC6	D4XPC6_ACIHA	Bacteria	alaS_HMP0015_1568	Acinetobacter haemolyticus ATCC 19194	884
1457	D4Y3H7	D4Y3H7_BACTR	Bacteria	GeothDRAFT_0440	Geobacillus thermoglucosidasius C56-YS93	877
1458	D4YE20	D4YE20_9LACT	Bacteria	alaS_HMPREF0061_0109	Aerococcus viridans ATCC 11563	880
1459	D4YPE3	D4YPE3_9MICO	Bacteria	alaS_HMPREF0183_1803	Brevibacterium mcbrellneri ATCC 49030	884
1460	D4YTW5	D4YTW5_9LACO	Bacteria	alaS_HMPREF0493_0976	Lactobacillus amylolyticus DSM 11664	879
1461	D4Z310	D4Z310_SPHJU	Bacteria	alaS_SJA_C1-21580	Sphingobium japonicum (strain NBRC 101211 / UT26S)	884
1462	D4ZAU0	D4ZAU0_SHEVD	Bacteria	alaS_SVI_3164	Shewanella violacea (strain JCM 10179 / CIP 106290 / LMG 19151)	874
1463	D5A1C6	D5A1C6_SPIPL	Bacteria	alaS_NIES39_L06520	Arthrospira platensis NIES-39	878
1464	D5AI86	D5AI86_STRGZ	Bacteria	SSGZ1_1094	Streptococcus suis (strain GZ1)	512
1465	D5AU58	D5AU58_RHOGB	Bacteria	alaS_RCAP_rc01752	Rhodobacter capsulatus (strain ATCC BAA-309 / NBRC 16581 / SB1)	884
1466	D5AYE4	D5AYE4_RICPP	Bacteria	alaS_rpr22_CDS836	Rickettsia prowazekii (strain Rp22)	877
1467	D5B2Q1	D5B2Q1_YERPZ	Bacteria	alaS_YPZ3_2908	Yersinia pestis (strain Z176003)	847
1468	D5BGH8	D5BGH8_ZUNPS	Bacteria	ZPR_0787	Zunongwangia profunda (strain DSM 18752 / CCTCC AB 206139 / S)	869
1469	D5BNR5	D5BNR5_PUNMI	Bacteria	SAR116_0089	Puniceispirillum marinum (strain IMCC1322)	879
1470	D5BZJ6	D5BZJ6_NITHN	Bacteria	Nhal_1120	Nitrosococcus halophilus (strain Nc4)	873
1471	D5C8H5	D5C8H5_ENTCC	Bacteria	ECL_04031	Enterobacter cloacae subsp. cloacae (strain ATCC 13047 / DSM 300)	875
1472	D5CU19	D5CU19_SIDLE	Bacteria	Slit_2103	Sideroxydans lithotrophicus (strain ES-1)	873
1473	D5CYI8	D5CYI8_ECOKI	Bacteria	pbpG_ECOK1_3068	Escherichia coli O18:K1:H7 (strain IHE3034 / ExPEC)	876
1474	D5DLE5	D5DLE5_BACMD	Bacteria	alaS_BMD_4597	Bacillus megaterium (strain DSM 319)	877
1475	D5DT03	D5DT03_BACMQ	Bacteria	alaS_BMQ_4611	Bacillus megaterium (strain ATCC 12872 / QMB1551)	877
1476	D5EF21	D5EF21_AMICL	Bacteria	Amico_1029	Aminobacterium colombiense (strain DSM 12261 / ALA-1)	881
1477	D5ELN7	D5ELN7_CORAD	Bacteria	Caka_0185	Coralliomargarita akajimensis (strain DSM 45221 / IAM 15411 / JCN)	941
1478	D5EUV5	D5EUV5_PRER2	Bacteria	alaS_PRU_0009	Prevotella ruminicola (strain ATCC 19189 / JCM 8958 / 23)	887
1479	D5H1H6	D5H1H6_LACCS	Bacteria	alaS_LCRIS_00414	Lactobacillus crispatus (strain ST1)	879
1480	D5H9F8	D5H9F8_SALRM	Bacteria	alaS_SRM_01742	Salinibacter ruber (strain M8)	966
1481	D5HG79	D5HG79_9FIRM	Bacteria	CCU_26190	Coproccoccus sp. ART55/1	887
1482	D5MF60	D5MF60_9BACT	Bacteria	alaS_DAMO_1329	NC10 bacterium 'Dutch sediment'	886
1483	D5N5H8	D5N5H8_BACSU	Bacteria	alaS_BSU6633_18827	Bacillus subtilis subsp. spizizenii ATCC 6633	878
1484	D5NCY4	D5NCY4_9BURK	Bacteria	Bch11DRAFT_2255	Burkholderia sp. Ch1-1	874
1485	D5NUR8	D5NUR8_CORAM	Bacteria	HMPREF0281_00317	Corynebacterium ammoniagenes DSM 20306	902
1486	D5PI02	D5PI02_9MYCO	Bacteria	alaS_HMPREF0591_5796	Mycobacterium parascrofulaceum ATCC BAA-614	901
1487	D5PM45	D5PM45_COREQ	Bacteria	alaS_HMPREF0724_0783	Rhodococcus equi ATCC 33707	890
1488	D5Q5T1	D5Q5T1_CLODI	Bacteria	alaS_HMPREF0220_2263	Clostridium difficile NAP08	879
1489	D5QVL1	D5QVL1_METTR	Bacteria	MettrDRAFT_3837	Methylosinus trichosporium OB3b	897
1490	D5R9H2	D5R9H2_9FIRM	Bacteria	CioleDRAFT_4228	Clostridium lentocellum DSM 5427	881
1491	D5RBP3	D5RBP3_FUSNN	Bacteria	alaS_HMPREF0397_0628	Fusobacterium nucleatum subsp. nucleatum ATCC 23726	867
1492	D5RQH1	D5RQH1_9PROT	Bacteria	alaS_HMPREF0731_3333	Roseomonas cervicalis ATCC 49957	881
1493	D5S2S5	D5S2S5_CLODI	Bacteria	alaS_HMPREF0219_2856	Clostridium difficile NAP07	879
1494	D5S8Y2	D5S8Y2_STRPA	Bacteria	alaS_HMPREF0833_1423	Streptococcus parasanguinis ATCC 15912	872
1495	D5T1D1	D5T1D1_LEUKI	Bacteria	LKI_02685	Leuconostoc kimchii (strain IMSNU 11154 / KCTC 2386 / IH25)	893
1496	D5TE56	D5TE56_LEGP2	Bacteria	alaS_lpa_02602	Legionella pneumophila serogroup 1 (strain 2300/99 Alcovy)	860

1497	D5THB6	D5THB6 BIFAV	Bacteria	alaS BalV_0904	Bifidobacterium animalis subsp. lactis (strain V9)	899
1498	D5TYE9	D5TYE9 BACT1	Bacteria	alaS BMB171_C4050	Bacillus thuringiensis (strain BMB171)	880
1499	D5U940	D5U940 BRAM5	Bacteria	Bmur_1118	Brachyspira murdochii (strain ATCC 51284 / DSM 12563 / 56-150)	857
1500	D5UEQ5	D5UEQ5 CELFN	Bacteria	Cfla_1818	Cellulomonas flavigena (strain ATCC 482 / DSM 20109 / NCIB 8073)	897
1501	D5UNL9	D5UNL9 TSUPD	Bacteria	Tpau_1975	Tsukamurella paurometabola (strain ATCC 8368 / DSM 20162 / JCM 890)	890
1502	D5V5R8	D5V5R8 AR CNC	Bacteria	Amit_0439	Arcobacter nitrofigilis (strain ATCC 33309 / DSM 7299 / LMG 7604)	850
1503	D5VB09	D5VB09 MORCR	Bacteria	alaS MCR_0591	Moraxella catarrhalis (strain RH4)	893
1504	D5VFE6	D5VFE6 CAUST	Bacteria	Cseg_1177	Caulobacter segnis (strain ATCC 21756 / DSM 7131 / JCM 7823 / N)	880
1505	D5W9R5	D5W9R5 BURSC	Bacteria	BC1002_2061	Burkholderia sp. (strain CCGE1002)	874
1506	D5WWZ3	D5WWZ3 BACT2	Bacteria	Btus_1107	Bacillus tusciae (strain DSM 2912 / NBRC 15312 / T2)	878
1507	D5WY65	D5WY65 THIK1	Bacteria	Tint_0778	Thiomonas intermedia (strain K12) (Thiobacillus intermedius)	917
1508	D5X833	D5X833 THEPJ	Bacteria	TherJR_1904	Thermincola potens (strain JR)	884
1509	D5XWK0	D5XWK0 MYCTU	Bacteria	TBDG_04014	Mycobacterium tuberculosis T92	904
1510	D5Y5E2	D5Y5E2 MYCTU	Bacteria	TBEG_01363	Mycobacterium tuberculosis T85	702
1511	D5YKF0	D5YKF0 MYCTU	Bacteria	TBGG_01761	Mycobacterium tuberculosis EAS054	904
1512	D5YUW6	D5YUW6 MYCTU	Bacteria	TBBG_02566	Mycobacterium tuberculosis 02_1987	904
1513	D5ZJ76	D5ZJ76 MYCTU	Bacteria	TBJG_03812	Mycobacterium tuberculosis T17	797
1514	D5ZTK9	D5ZTK9 9ACTO	Bacteria	SSFG_05875	Streptomyces ghanaensis ATCC 14672	889
1515	D6AKE1	D6AKE1 STRFL	Bacteria	SSGG_00588	Streptomyces roseosporus NRRL 15998	889
1516	D6B972	D6B972 9ACTO	Bacteria	SSHG_00604	Streptomyces albus J1074	890
1517	D6B9N4	D6B9N4 9ACTO	Bacteria	SSHG_02719	Streptomyces albus J1074	740
1518	D6BH18	D6BH18 9FUSO	Bacteria	PSAG_01500	Fusobacterium sp. D11	867
1519	D6CKW3	D6CKW3 THIS3	Bacteria	alaS THI_1018	Thiomonas sp. (strain 3As)	917
1520	D6D127	D6D127 9BACE	Bacteria	BXY_31190	Bacteroides xylanisolvens XB1A	872
1521	D6D8W6	D6D8W6 BIFLO	Bacteria	BIL_11000	Bifidobacterium longum subsp. longum F8	893
1522	D6DX51	D6DX51 ENTCL	Bacteria	ENC_29420	Enterobacter cloacae subsp. cloacae NCTC 9394	875
1523	D6E522	D6E522 9FIRM	Bacteria	EUR_14190	Eubacterium rectale DSM 17629	886
1524	D6E903	D6E903 9ACTN	Bacteria	GPA_17180	Gordonibacter pamelaeeae 7-10-1-b	882
1525	D6EPS6	D6EPS6 STRLI	Bacteria	SSPG_06054	Streptomyces lividans TK24	890
1526	D6FJC2	D6FJC2 MYCTU	Bacteria	TBNG_03198	Mycobacterium tuberculosis CPHL_A	828
1527	D6FYU7	D6FYU7 MYCTU	Bacteria	TBOG_03105	Mycobacterium tuberculosis K85	750
1528	D6FYU9	D6FYU9 MYCTU	Bacteria	TBOG_03107	Mycobacterium tuberculosis K85	904
1529	D6GI32	D6GI32 9ENTR	Bacteria	HMPREF0485_02767	Klebsiella sp. 1_1_55	875
1530	D6GRR3	D6GRR3 9FIRM	Bacteria	HMPREF0389_00269	Filifactor alocis ATCC 35896	881
1531	D6H016	D6H016 STAAU	Bacteria	SAVG_02191	Staphylococcus aureus subsp. aureus M1015	876
1532	D6HBI7	D6HBI7 NEIGO	Bacteria	NGMG_02151	Neisseria gonorrhoeae DG12	881
1533	D6HHH9	D6HHH9 STAAU	Bacteria	SCAG_02020	Staphylococcus aureus subsp. aureus 58-424	876
1534	D6HLR4	D6HLR4 9FIRM	Bacteria	HMPREF0863_00733	Erysipelotrichaceae bacterium 5_2_54FAA	893
1535	D6I007	D6I007 ECOLX	Bacteria	ECCG_02038	Escherichia coli B088	876
1536	D6ICC9	D6ICC9 ECOLX	Bacteria	ECDG_03542	Escherichia coli B185	876
1537	D6IU34	D6IU34 ECOLX	Bacteria	ECCG_01479	Escherichia coli FVEC1412	876
1538	D6J139	D6J139 STAAU	Bacteria	SAZG_01645	Staphylococcus aureus subsp. aureus M809	876
1539	D6JE36	D6JE36 ECOLX	Bacteria	ECEG_02054	Escherichia coli B354	876
1540	D6JNT3	D6JNT3 NEIGO	Bacteria	NGNG_01894	Neisseria gonorrhoeae F62	881
1541	D6JR62	D6JR62 ACIG3	Bacteria	HMPREF0013_00826	Acinetobacter sp. SH024	878
1542	D6K7I5	D6K7I5 9ACTO	Bacteria	SSTG_00346	Streptomyces sp. e14	890
1543	D6KIG8	D6KIG8 9FIRM	Bacteria	HMPREF0873_00565	Veillonella sp. 3_1_44	871
1544	D6KNL7	D6KNL7 9FIRM	Bacteria	HMPREF0874_00548	Veillonella sp. 6_1_27	871
1545	D6KU97	D6KU97 SCAIO	Bacteria	HMPREF9020_00679	Scardovia inopinata F0304	900
1546	D6KXZ4	D6KXZ4 9NEIS	Bacteria	HMPREF9021_00544	Simonsiella muelleri ATCC 29453	873
1547	D6L5E3	D6L5E3 PARDN	Bacteria	HMPREF9017_00733	Parascardovia denticolens F0305	903
1548	D6LC80	D6LC80 9FUSO	Bacteria	HMPREF0405_01073	Fusobacterium sp. 3_1_27	867
1549	D6LHW0	D6LHW0 9FUSO	Bacteria	HMPREF0400_01320	Fusobacterium sp. 1_1_41FAA	867
1550	D6LKP1	D6LKP1 9RHIZ	Bacteria	BAZG_01464	Brucella sp. NVSL 07-0026	885
1551	D6LYH6	D6LYH6 STAAU	Bacteria	SIAG_00724	Staphylococcus aureus subsp. aureus EMRSA16	877
1552	D6M8Z1	D6M8Z1 9CLOT	Bacteria	alaS CLCAR_0879	Clostridium carboxidivorans P7	879
1553	D6RX64	D6RX64 BORVA	Bacteria	BVAVS116_0220	Borrelia valaisiana VS116	594
1554	D6S339	D6S339 9LACO	Bacteria	alaS HMPREF0526_10639	Lactobacillus jensenii JV-V16	878
1555	D6SA94	D6SA94 PEPMA	Bacteria	alaS HMPREF0391_11366	Finexgoldia magna ATCC 53516	873
1556	D6SI27	D6SI27 STAAU	Bacteria	alaS HMPREF0769_12061	Staphylococcus aureus subsp. aureus MN8	877
1557	D6SNX2	D6SNX2 9DELT	Bacteria	Dthio_PD1807	Desulfonatronospira thiodismutans ASO3-1	882
1558	D6SVZ5	D6SVZ5 GARVA	Bacteria	GVAMD_0868	Gardnerella vaginalis AMD	894
1559	D6T0G2	D6T0G2 GARVA	Bacteria	GV51_1076	Gardnerella vaginalis 5-1	894
1560	D6T7Y6	D6T7Y6 STAAU	Bacteria	SLAG_01771	Staphylococcus aureus A8796	876
1561	D6TGE6	D6TGE6 9CHLR	Bacteria	Krac_12285	Ktedonobacter racemifer DSM 44963	880
1562	D6U9T8	D6U9T8 STAAU	Bacteria	alaS HMPREF0782_0279	Staphylococcus aureus subsp. aureus ATCC 51811	876
1563	D6V296	D6V296 9BRAD	Bacteria	AfiDRAFT_0062	Afia sp. 1NLS2	888
1564	D6XWW8	D6XWW8 BACIE	Bacteria	Bsel_2442	Bacillus selenitireducens (strain ATCC 700615 / DSM 15326 / MLS1)	877
1565	D6Y2B0	D6Y2B0 THEBD	Bacteria	Tbis_2047	Thermobispora bispora (strain ATCC 19993 / DSM 43833 / CBS 139)	889
1566	D6YBW1	D6YBW1 CHLT5	Bacteria	alaS E150_03990	Chlamydia trachomatis serovar E (strain E/150)	875
1567	D6YGN2	D6YGN2 CHLT7	Bacteria	alaS G9768_03965	Chlamydia trachomatis serovar G (strain G/9768)	875
1568	D6YJA1	D6YJA1 CHLT0	Bacteria	alaS G11222_03985	Chlamydia trachomatis serovar G (strain G/11222)	874
1569	D6Y LX2	D6Y LX2 CHLTG	Bacteria	alaS G11074_03960	Chlamydia trachomatis serovar G (strain G/11074)	875
1570	D6YNN3	D6YNN3 CHLT1	Bacteria	alaS E11023_03955	Chlamydia trachomatis serovar E (strain E/11023)	875
1571	D6YTZ8	D6YTZ8 WADCW	Bacteria	alaS wcv_0234	Waddlia chondrophila (strain ATCC VR-1470 / WSU 86-1044)	870
1572	D6YZB0	D6YZB0 CHLT9	Bacteria	alaS CTG9301_03975	Chlamydia trachomatis serovar G (strain G/9301)	875
1573	D6Z4V7	D6Z4V7 DESAT	Bacteria	alaS DaAHT2_1902	Desulfurivibrio alkaliphilus (strain DSM 19089 / UNIQEM U267 / AH)	879



1574	D6Z879	D6Z879 SEGRD	Bacteria	Srot_1699	Segniliparus rotundus (strain ATCC BAA-972 / CDC 1076 / CIP 108)	892
1575	D6ZHD8	D6ZHD8 MOBCV	Bacteria	alaS HMPREF0573_11727	Mobiluncus curtisii (strain ATCC 43063 / DSM 2711 / V125) (Falcivi)	895
1576	D6ZS03	D6ZS03 STRP0	Bacteria	alaS HMPREF0837_11164	Streptococcus pneumoniae serotype A19 (strain TCH8431)	872
1577	D6ZTY0	D6ZTY0 BIFLJ	Bacteria	alaS BLJ_0870	Bifidobacterium longum subsp. longum (strain JDM301)	871
1578	D7A1A0	D7A1A0 STAND	Bacteria	Snov_2162	Starkeya novella (strain ATCC 8093 / DSM 506 / CCM 1077 / IAM 1)	883
1579	D7AM59	D7AM59 GEOSK	Bacteria	KN400_0124	Geobacter sulfurreducens (strain DL-1 / KN400)	875
1580	D7ANP8	D7ANP8 THEM3	Bacteria	Tmath_1096	Thermoanaerobacter mathranii (strain DSM 11426 / CIP 108742 / J)	877
1581	D7B1Q8	D7B1Q8 NOCDD	Bacteria	Ndas_3075	Nocardiopsis dassonvillei (strain ATCC 23218 / DSM 43111 / IMRU)	888
1582	D7BHC9	D7BHC9 MEISD	Bacteria	Mesil_0223	Meiothermus silvanus (strain ATCC 700542 / DSM 9946 / VI-R2) (T)	894
1583	D7BNR9	D7BNR9 ARCHD	Bacteria	Arch_0842	Arcanobacterium haemolyticum (strain ATCC 9345 / DSM 20595 / N)	890
1584	D7BWW4	D7BWW4 STRBB	Bacteria	alaS SBI_02378	Streptomyces bingchengensis (strain BCW-1)	889
1585	D7CK26	D7CK26 SYNLT	Bacteria	Slip_0356	Syntrophothermus lipocalidus (strain DSM 12680 / TGB-C1)	877
1586	D7D2X1	D7D2X1 GEOSC	Bacteria	GC56T3_0936	Geobacillus sp. (strain C56-T3)	878
1587	D7DEM1	D7DEM1 CHLTD	Bacteria	alaS CTDEC_0749	Chlamydia trachomatis serovar D (strain D-EC)	924
1588	D7DFC0	D7DFC0 CHLTL	Bacteria	alaS CTDL_0749	Chlamydia trachomatis serovar D (strain D-LC)	924
1589	D7DL84	D7DL84 METSO	Bacteria	M301_2187	Methylotenera sp. (strain 301)	901
1590	D7E1R7	D7E1R7 NOSA0	Bacteria	Aazo_3088	Nostoc azollae (strain 0708) (Anabaena azollae (strain 0708))	880
1591	D7EUQ1	D7EUQ1 MYCTU	Bacteria	TBAG_01444	Mycobacterium tuberculosis 94_M4241A	750
1592	D7GDR7	D7GDR7 PROFC	Bacteria	alaS PFREUD_11560	Propionibacterium freudenreichii subsp. shermanii (strain ATCC 961)	895
1593	D7GW56	D7GW56 9FIRM	Bacteria	CK3_25040	Butyrate-producing bacterium SS3/4	884
1594	D7GYU9	D7GYU9 BRUAB	Bacteria	BAYG_01466	Brucella abortus bv. 5 str. B3196	885
1595	D7HDP4	D7HDP4 VIBCH	Bacteria	VCRC385_03289	Vibrio cholerae RC385	860
1596	D7I349	D7I349 PSESS	Bacteria	PSA3335_3617	Pseudomonas savastanoi pv. savastanoi NCPPB 3335	874
1597	D7IBD5	D7IBD5 9BACE	Bacteria	HMPREF9007_01576	Bacteroides sp. 1_1_14	872
1598	D7IV30	D7IV30 9BACE	Bacteria	HMPREF0104_03303	Bacteroides sp. 3_1_19	873
1599	D7J000	D7J000 9BACE	Bacteria	HMPREF0106_00735	Bacteroides sp. D22	872
1600	D7JDI2	D7JDI2 9BACT	Bacteria	HMPREF0156_00670	Bacteroidetes oral taxon 274 str. F0058	867
1601	D7JSL6	D7JSL6 ECOLX	Bacteria	ECFG_01664	Escherichia coli FVE1302	876
1602	D7K870	D7K870 9BACE	Bacteria	HMPREF9010_02582	Bacteroides sp. 3_1_23	872
1603	D7MZG7	D7MZG7 9NEIS	Bacteria	HMPREF9016_00350	Neisseria sp. oral taxon 014 str. F0314	1021
1604	D7N6D0	D7N6D0 9FIRM	Bacteria	HMPREF0629_01093	Peptoniphilus sp. oral taxon 386 str. F0131	874
1605	D7NCY0	D7NCY0 9BACT	Bacteria	HMPREF0665_01395	Prevotella oris C735	886
1606	D7UIY6	D7UIY6 LISMO	Bacteria	LMHG_12583	Listeria monocytogenes FSL N1-017	879
1607	D7UZ50	D7UZ50 LISGR	Bacteria	alaS HMPREF0556_12302	Listeria grayi DSM 20601	876
1608	D7V4Y4	D7V4Y4 9LACO	Bacteria	alaS HMPREF0514_11184	Lactobacillus gasseri JV-V03	882
1609	D7VB91	D7VB91 LACPL	Bacteria	alaS HMPREF0531_11414	Lactobacillus plantarum subsp. plantarum ATCC 14917	880
1610	D7VJ27	D7VJ27 9SPHI	Bacteria	alaS HMPREF0766_10996	Sphingobacterium spiritivorum ATCC 33861	893
1611	D7WCH1	D7WCH1 9CORY	Bacteria	alaS HMPREF0291_11509	Corynebacterium genitalium ATCC 33030	893
1612	D7WKR4	D7WKR4 BACCE	Bacteria	alaS BCSJ1_23259	Bacillus cereus S31	880
1613	D7WQH3	D7WQH3 9BACI	Bacteria	BFZC1_06773	Lysinibacillus fusiformis ZC1	886
1614	D7XBF4	D7XBF4 ECOLX	Bacteria	HMPREF9552_04001	Escherichia coli MS 198-1	784
1615	D7XUK6	D7XUK6 ECOLX	Bacteria	HMPREF9536_04765	Escherichia coli MS 84-1	784
1616	D7Y5Y9	D7Y5Y9 ECOLX	Bacteria	HMPREF9540_03004	Escherichia coli MS 115-1	784
1617	D7YIN5	D7YIN5 ECOLX	Bacteria	HMPREF9548_02416	Escherichia coli MS 182-1	784
1618	D7YW33	D7YW33 ECOLX	Bacteria	HMPREF9531_01429	Escherichia coli MS 45-1	784
1619	D7ZLS8	D7ZLS8 ECOLX	Bacteria	HMPREF9534_05260	Escherichia coli MS 69-1	784
1620	D7ZVK7	D7ZVK7 ECOLX	Bacteria	HMPREF9550_02829	Escherichia coli MS 187-1	784
1621	D8AGN4	D8AGN4 ECOLX	Bacteria	HMPREF9530_05757	Escherichia coli MS 21-1	784
1622	D8AIR9	D8AIR9 ECOLX	Bacteria	HMPREF9541_00645	Escherichia coli MS 116-1	784
1623	D8AZ24	D8AZ24 ECOLX	Bacteria	HMPREF9547_00846	Escherichia coli MS 175-1	784
1624	D8BC88	D8BC88 ECOLX	Bacteria	HMPREF9553_00577	Escherichia coli MS 200-1	784
1625	D8BZS7	D8BZS7 ECOLX	Bacteria	HMPREF9551_03175	Escherichia coli MS 196-1	839
1626	D8CGR8	D8CGR8 ECOLX	Bacteria	HMPREF9549_03540	Escherichia coli MS 185-1	784
1627	D8D4Y1	D8D4Y1 COMTE	Bacteria	alaS CTS44_09257	Comamonas testosteroni S44	874
1628	D8DT48	D8DT48 PREBR	Bacteria	alaS PBR_0727	Prevotella bryantii B14	888
1629	D8E1G5	D8E1G5 ECOLX	Bacteria	HMPREF9346_00268	Escherichia coli MS 119-7	784
1630	D8EIJ4	D8EIJ4 ECOLX	Bacteria	HMPREF9345_00933	Escherichia coli MS 107-1	784
1631	D8FEI5	D8FEI5 9DELTA	Bacteria	alaS NPH_1793	Delta proteobacterium NaphS2	880
1632	D8FJ12	D8FJ12 9FIRM	Bacteria	alaS HMPREF9131_1203	Peptoniphilus sp. oral taxon 836 str. F0141	874
1633	D8FMC1	D8FMC1 LACDE	Bacteria	alaS HMPREF9264_0846	Lactobacillus delbrueckii subsp. bulgaricus PB2003/044-T3-4	877
1634	D8G7C7	D8G7C7 9CYAN	Bacteria	alaS OSCI_3800047	Oscillatoria sp. PCC 6506	879
1635	D8GEM3	D8GEM3 LACCZ	Bacteria	LCAZH_0727	Lactobacillus casei (strain Zhang)	881
1636	D8GRE5	D8GRE5 CLOLD	Bacteria	alaS CLJU_c12150	Clostridium ljungdahlii (strain ATCC 55383 / DSM 13528 / PETC)	879
1637	D8GWE1	D8GWE1 BACAI	Bacteria	alaS2 BACI_c43740	Bacillus cereus var. anthracis (strain CI)	880
1638	D8HBT6	D8HBT6 STAAP	Bacteria	alaS SAOV_1616	Staphylococcus aureus subsp. aureus (strain ED133)	876
1639	D8HY66	D8HY66 AMYMU	Bacteria	alaS AMED_2713	Amycolatopsis mediterranei (strain U-32)	886
1640	D8IDK2	D8IDK2 BRAP9	Bacteria	alaS BP951000_1236	Brachyspira pilosicoli (strain ATCC BAA-1826 / 95/1000)	864
1641	D8IH66	D8IH66 LACFC	Bacteria	LC40_0353	Lactobacillus fermentum (strain CECT 5716)	882
1642	D8ILN9	D8ILN9 LACSC	Bacteria	alaS HN6_00916	Lactobacillus salivarius (strain CECT 5713)	423
1643	D8IQI0	D8IQI0 HERSS	Bacteria	alaS Hsero_3614	Herbaspirillum seropedicae (strain SmR1)	874
1644	D8JP25	D8JP25 ACISD	Bacteria	alaS AOLE_13560	Acinetobacter sp. (strain JCM 1667 / KCTC 23045 / DR1)	883
1645	D8JQG9	D8JQG9 HYPDA	Bacteria	Hden_2124	Hyphomicrobium denitrificans (strain ATCC 51888 / DSM 1869 / NC)	897
1646	D8K228	D8K228 DEHLB	Bacteria	Dehly_1367	Dehalogenimonas lykanthroporepellens (strain ATCC BAA-1523 / JC)	856
1647	D8KBY5	D8KBY5 NITWC	Bacteria	alaS Nwat_0794	Nitrosococcus watsoni (strain C-113)	874
1648	D8KD77	D8KD77 LACLN	Bacteria	alaS LLN2_09815	Lactococcus lactis subsp. cremoris (strain NZ9000)	872
1649	D8KMX6	D8KMX6 CORPF	Bacteria	alaS cpfrc_01150	Corynebacterium pseudotuberculosis (strain FRC41)	890
1650	D8MGL8	D8MGL8 LEUGT	Bacteria	alaS LEGAS_1338	Leuconostoc gasicomitatum (strain DSM 15947 / CECT 5767 / JCM)	893

1651	D8MW05	D8MW05 ERWBE	Bacteria	alaS EbC_34810	Erwinia billingiae (strain Eb661)	875
1652	D8N6B0	D8N6B0 RALSO	Bacteria	alaS CMR15_30103	Ralstonia solanacearum (Pseudomonas solanacearum)	888
1653	D8NMJ5	D8NMJ5 RALSO	Bacteria	alaS RCFBP_20624	Ralstonia solanacearum (Pseudomonas solanacearum)	880
1654	D8NWW3	D8NWW3 RALSO	Bacteria	alaS RPSI07_2546	Ralstonia solanacearum (Pseudomonas solanacearum)	880
1655	D8PDY1	D8PDY1_9BACT	Bacteria	alaS NIDE1707	Candidatus Nitrospira defluvii	876
1656	D8UPX0	D8UPX0_9MICC	Bacteria	HMPREF0734_00372	Rothia dentocariosa M567	893
1657	D9I357	D9I357_9RICK	Bacteria		Candidatus Odysseella thessalonicensis	865
1658	D9N6G9	D9N6G9_STRPN	Bacteria	CGSSpBS458_11598	Streptococcus pneumoniae BS458	872
1659	D9NCY9	D9NCY9_STRPN	Bacteria	CGSSpBS457_02702	Streptococcus pneumoniae BS457	872
1660	D9NLG8	D9NLG8_STRPN	Bacteria	CGSSpBS397_10505	Streptococcus pneumoniae BS397	872
1661	D9NRY4	D9NRY4_STRPN	Bacteria	CGSSp14BS292_04630	Streptococcus pneumoniae SP14-BS292	872
1662	D9NXE0	D9NXE0_STRPN	Bacteria	CGSSpBS293_10943	Streptococcus pneumoniae SP-BS293	872
1663	D9P885	D9P885_ACTPL	Bacteria	alaS APP2_0883	Actinobacillus pleuropneumoniae serovar 2 str. 4226	874
1664	D9P907	D9P907_ACTPL	Bacteria	alaS APP6_1039 appser6_7	Actinobacillus pleuropneumoniae serovar 6 str. Femo	874
1665	D9PSG2	D9PSG2_PEPMA	Bacteria	alaS HMPREF9261_0671	Finexgoldia magna ACS-171-V-Col3	873
1666	D9Q8N6	D9Q8N6_CORP1	Bacteria	alaS Cp1002_1147	Corynebacterium pseudotuberculosis (strain 1002)	890
1667	D9QAP6	D9QAP6_CORP2	Bacteria	alaS CpC231_1146	Corynebacterium pseudotuberculosis (strain C231)	890
1668	D9QF01	D9QF01_BRESC	Bacteria	alaS Bresu_1174	Brevundimonas subvibrioides (strain ATCC 15264 / DSM 4735 / LM	881
1669	D9QUP9	D9QUP9_ACEAZ	Bacteria	alaS Acear_0411	Acetohalobium arabaticum (strain ATCC 49924 / DSM 5501 / Z-728	875
1670	D9R1A5	D9R1A5_CLOSW	Bacteria	alaS Closa_2073	Clostridium saccharolyticum (strain ATCC 35040 / DSM 2544 / NRC	879
1671	D9RHR3	D9RHR3_STAAJ	Bacteria	alaS SAA6159_01551	Staphylococcus aureus (strain JKD6159)	876
1672	D9RKL2	D9RKL2_STAAK	Bacteria	alaS SAA6008_01588	Staphylococcus aureus (strain JKD6008)	877
1673	D9RSA3	D9RSA3_PREMB	Bacteria	alaS HMPREF0659_A6070	Prevotella melaninogenica (strain ATCC 25845 / DSM 7089 / JCM 6	887
1674	D9RXN6	D9RXN6_THEOJ	Bacteria	alaS Toce_1355	Thermosediminibacter oceani (strain ATCC BAA-1034 / DSM 16646	880
1675	D9SAE5	D9SAE5_FIBSS	Bacteria	alaS FSU_1489	Fibroacterium succinigenes (strain ATCC 19169 / S85)	882
1676	D9SC89	D9SC89_GALCS	Bacteria	alaS Galf_0510	Gallionella capsiferriformans (strain ES-2) (Gallionella ferruginea ca	873
1677	D9SL58	D9SL58_CLOC7	Bacteria	alaS Clocel_1830	Clostridium cellulovorans (strain ATCC 35296 / DSM 3052 / OCM 3	879
1678	D9T5Q9	D9T5Q9_MICAI	Bacteria	alaS Micau_2317	Micromonospora aurantiaca (strain ATCC 27029 / DSM 43813 / JCM	893
1679	D9TKI6	D9TKI6_CALOO	Bacteria	alaS COB47_1226	Caldicellulosiruptor obsidiansis (strain ATCC BAA-2073 / strain OB4	881
1680	D9TPU4	D9TPU4_THETC	Bacteria	alaS Tthe_1262	Thermoanaerobacterium thermosaccharolyticum (strain ATCC 7956	879
1681	D9UCB5	D9UCB5_9ACTO	Bacteria	SSLG_00742	Streptomyces sp. SPB78	889
1682	D9UZ75	D9UZ75_9ACTO	Bacteria	SSMG_02218	Streptomyces sp. AA4	887
1683	D9VK65	D9VK65_9ACTO	Bacteria	SSNG_01348	Streptomyces sp. C	889
1684	D9WPF1	D9WPF1_STRHY	Bacteria	SSOG_01528	Streptomyces hygroscopicus ATCC 53653	828
1685	D9XID8	D9XID8_STRVR	Bacteria	SSQG_01372	Streptomyces viridochromogenes DSM 40736	890
1686	D9XUT8	D9XUT8_9ACTO	Bacteria	SSRG_05238	Streptomyces griseoflavus Tu4000	890
1687	D9Y6V6	D9Y6V6_9BURK	Bacteria	HMPREF0189_01261	Burkholderiales bacterium 1_1_47	875
1688	D9YB19	D9YB19_9DELT	Bacteria	HMPREF0326_00998	Desulfovibrio sp. 3_1_syn3	892
1689	E0DF71	E0DF71_9CORY	Bacteria	alaS HMPREF0299_6508	Corynebacterium matruchotii ATCC 14266	889
1690	E0DL72	E0DL72_9RHIZ	Bacteria	alaS BIBO1_0764	Brucella sp. BO1	885
1691	E0DUS5	E0DUS5_9RHIZ	Bacteria	alaS BROD_0817	Brucella sp. NF 2653	885
1692	E0E138	E0E138_9FIRM	Bacteria	alaS HMPREF0634_0390	Peptostreptococcus stomatis DSM 17678	878
1693	E0E7D4	E0E7D4_ACTPL	Bacteria	appser1_7130	Actinobacillus pleuropneumoniae serovar 1 str. 4074	874
1694	E0EDC0	E0EDC0_ACTPL	Bacteria	appser2_6180	Actinobacillus pleuropneumoniae serovar 2 str. S1536	874
1695	E0EJ11	E0EJ11_ACTPL	Bacteria	appser4_6520	Actinobacillus pleuropneumoniae serovar 4 str. M62	874
1696	E0EXA3	E0EXA3_ACTPL	Bacteria	appser9_7100	Actinobacillus pleuropneumoniae serovar 9 str. CVJ13261	874
1697	E0F3F7	E0F3F7_ACTPL	Bacteria	appser10_6780	Actinobacillus pleuropneumoniae serovar 10 str. D13039	874
1698	E0F9Q6	E0F9Q6_ACTPL	Bacteria	appser11_7190	Actinobacillus pleuropneumoniae serovar 11 str. 56153	874
1699	E0FFU3	E0FFU3_ACTPL	Bacteria	appser12_6750	Actinobacillus pleuropneumoniae serovar 12 str. 1096	874
1700	E0FLV5	E0FLV5_ACTPL	Bacteria	appser13_7100	Actinobacillus pleuropneumoniae serovar 13 str. N273	874
1701	E0FS73	E0FS73_9THEO	Bacteria	ThewiDRAFT_0426	Thermoanaerobacter wiegelsii Rt8.B1	877
1702	E0G8B7	E0G8B7_ENTFA	Bacteria	HMPREF9498_03217	Enterococcus faecalis TX4248	880
1703	E0GEV3	E0GEV3_ENTFA	Bacteria	HMPREF9514_02102	Enterococcus faecalis TX0855	880
1704	E0GQX8	E0GQX8_ENTFA	Bacteria	HMPREF9521_03076	Enterococcus faecalis TX2134	880
1705	E0GVB7	E0GVB7_ENTFA	Bacteria	HMPREF9515_01505	Enterococcus faecalis TX0860	880
1706	E0H4N0	E0H4N0_ENTFA	Bacteria	HMPREF9505_01531	Enterococcus faecalis TX0109	880
1707	E0HDI4	E0HDI4_ENTFA	Bacteria	HMPREF9509_01674	Enterococcus faecalis TX0411	880
1708	E0HMR1	E0HMR1_9GAMM	Bacteria	Sbal183DRAFT_1612	Shewanella baltica OS183	874
1709	E0HXE9	E0HXE9_9BACT	Bacteria	ThebaDRAFT_1031	Thermotogales bacterium mesG1.Ag.4.2	869
1710	E0IE04	E0IE04_9BACL	Bacteria	PaecuDRAFT_3895	Paenibacillus curdolanolyticus YK9	877
1711	E0IH01	E0IH01_9GAMM	Bacteria	Sbal175DRAFT_0392	Shewanella baltica BA175	874
1712	E0J5K6	E0J5K6_ECOLX	Bacteria	alaS ECW_m2896 EschWD	Escherichia coli W	876
1713	E0JDY3	E0JDY3_RHIME	Bacteria	SinmeDRAFT_2091	Sinorhizobium meliloti BL225C	887
1714	E0JZ10	E0JZ10_RHIME	Bacteria	SinmeDRAFT_2411	Sinorhizobium meliloti AK83	887
1715	E0KLY1	E0KLY1_STRVO	Bacteria	StrviDRAFT_3658	Streptomyces violaceusniger Tu 4113	890
1716	E0LFE8	E0LFE8_SPHCR	Bacteria	SphchDRAFT_0199	Sphingobium chlorophenicum L-1	884
1717	E0M4K0	E0M4K0_9ENTR	Bacteria	PanABDRAFT_4319	Pantoea sp. aB	875
1718	E0MJM2	E0MJM2_9RHOB	Bacteria	alaS R2A130_0089	Ahrensia sp. R2A130	884
1719	E0MY70	E0MY70_9CORY	Bacteria	alaS HMPREF0277_1454	Corynebacterium accolens ATCC 49726	894
1720	E0N1A9	E0N1A9_9ACTO	Bacteria	alaS HMPREF0574_0183	Mobiluncus curtisii subsp. curtisii ATCC 35241	895
1721	E0N7K2	E0N7K2_NEIME	Bacteria	alaS HMPREF0602_0482	Neisseria meningitidis ATCC 13091	885
1722	E0NFU7	E0NFU7_PEDAC	Bacteria	alaS HMPREF0623_0702	Pediococcus acidilactici DSM 20284	881
1723	E0NN14	E0NN14_9FIRM	Bacteria	alaS HMPREF9225_1553	Peptoniphilus duerdenii ATCC BAA-1640	874
1724	E0NUN2	E0NUN2_9BACT	Bacteria	alaS HMPREF0658_1887	Prevotella marshii DSM 16973	875
1725	E0NWX2	E0NWX2_9FIRM	Bacteria	alaS HMPREF9166_0208	Selenomonas sp. oral taxon 149 str. 67H29BP	890
1726	E0P7T3	E0P7T3_STAAU	Bacteria	alaS HMPREF0783_1742	Staphylococcus aureus subsp. aureus ATCC BAA-39	877
1727	E0PCF8	E0PCF8_STREI	Bacteria	alaS HMPREF9319_0531	Streptococcus bovis ATCC 700338	888



1728	EOPIS7	EOPIS7_STRGY	Bacteria	alaS HMPREF9352_0663	Streptococcus gallolyticus subsp. gallolyticus TX20005	888
1729	EOPRX5	EOPRX5_STRMT	Bacteria	alaS HMPREF8571_1292	Streptococcus mitis ATCC 6249	872
1730	EOPVB9	EOPVB9_STRPY	Bacteria	alaS HMPREF0841_0693	Streptococcus pyogenes ATCC 10782	872
1731	E0Q0G5	E0Q0G5_9STRE	Bacteria	alaS HMPREF9189_0546	Streptococcus sp. oral taxon 071 str. 73H25AP	872
1732	E0Q6P9	E0Q6P9_9BIFI	Bacteria	alaS HMPREF0168_0807	Bifidobacterium dentium ATCC 27679	892
1733	E0QIC9	E0QIC9_9FIRM	Bacteria	alaS HMPREF0379_0777	Eubacterium yurii subsp. margaretae ATCC 43715	880
1734	E0QRM1	E0QRM1_9ACTO	Bacteria	alaS HMPREF0580_1536	Mobiluncus mulieris ATCC 35239	894
1735	E0QV91	E0QV91_ECOLX	Bacteria	alaS ECNC101_10954	Escherichia coli NC101	876
1736	E0RLR7	E0RLR7_PAEP6	Bacteria	alaS PPE_03577	Paenibacillus polymyxa (strain E681)	877
1737	E0RRW1	E0RRW1_SPITD	Bacteria	STHERM_c07990	Spirochaeta thermophila (strain ATCC 49972 / DSM 6192 / RI 19.B	603
1738	E0S2J3	E0S2J3_BUTPB	Bacteria	alaS bpr_11221	Butyrivibrio proteoclasticus (strain ATCC 51982 / DSM 14932 / B31	884
1739	E0SC73	E0SC73_DICD3	Bacteria	alaS Dda3937_03152	Dickeya dadantii (strain 3937) (Erwinia chrysanthemi (strain 3937)	875
1740	E0SUR5	E0SUR5_STRZA	Bacteria	alaS SPAP_1413	Streptococcus pneumoniae (strain AP200)	872
1741	E0T6W7	E0T6W7_EDWTF	Bacteria	alaS ETAF_2595	Edwardsiella tarda (strain FL6-60)	875
1742	E0TEF8	E0TEF8_PARBH	Bacteria	alaS PB2503_09959	Parvularcula bermudensis (strain ATCC BAA-594 / HTCC2503 / KCT	884
1743	E0TMD0	E0TMD0_STRZ6	Bacteria	alaS SP670_0914	Streptococcus pneumoniae (strain 670-6B)	872
1744	E0TUJ4	E0TUJ4_BACPZ	Bacteria	alaS BSUW23_13260	Bacillus subtilis subsp. spizizenii (strain ATCC 23059 / NRRL B-1447	878
1745	E0U6K3	E0U6K3_CYAP2	Bacteria	alaS Cyan7822_2800	Cyanothece sp. (strain PCC 7822)	881
1746	E0UQQ8	E0UQQ8_SULAO	Bacteria	alaS Saut_1886	Sulfurimonas autotrophica (strain ATCC BAA-671 / DSM 16294 / JC	850
1747	E0WR43	E0WR43_9ENTR	Bacteria	alaS REG_0416	Candidatus Regiella insecticola LSR1	893
1748	E1CTD1	E1CTD1_VIBPA	Bacteria	alaS VIPARP466_2483	Vibrio parahaemolyticus Peru-466	860
1749	E1DGA0	E1DGA0_VIBPA	Bacteria	alaS VIPARAQ4037_1471	Vibrio parahaemolyticus AQ4037	860
1750	E1DPM1	E1DPM1_VIBPA	Bacteria	alaS VIPARAN5034_2693	Vibrio parahaemolyticus AN-5034	860
1751	E1DVL2	E1DVL2_LACRE	Bacteria	alaS HMPREF0538_10136	Lactobacillus reuteri SD2112	895
1752	E1E7Z4	E1E7Z4_STAAU	Bacteria	alaS HMPREF0773_11396	Staphylococcus aureus subsp. aureus TCH70	876
1753	E1EAT8	E1EAT8_VIBPA	Bacteria	alaS_2_VIPARK5030_2489	Vibrio parahaemolyticus K5030	788
1754	E1ES28	E1ES28_ENTFA	Bacteria	alaS HMPREF0347_7498	Enterococcus faecalis TUSoD Ef11	880
1755	E1FDW5	E1FDW5_9THEO	Bacteria	Teth561_PD1062	Thermoanaerobacter sp. X561	877
1756	E1GTD7	E1GTD7_9BACT	Bacteria	alaS HMPREF9018_1630	Prevotella amnii CRIS 21A-A	884
1757	E1H0S2	E1H0S2_STRPN	Bacteria	alaS CGSspBS455_03644	Streptococcus pneumoniae BS455	872
1758	E1HC08	E1HC08_MYCTU	Bacteria	TMAG_02359	Mycobacterium tuberculosis SUMu001	904
1759	E1HLL3	E1HLL3_ECOLX	Bacteria	HMPREF9543_01948	Escherichia coli MS 146-1	784
1760	E1HYU1	E1HYU1_ECOLX	Bacteria	HMPREF9535_01259	Escherichia coli MS 78-1	784
1761	E1IER3	E1IER3_9CHLR	Bacteria	OSCT_1814	Oscillochloris trichoides DG-6	895
1762	E1IQC3	E1IQC3_ECOLX	Bacteria	HMPREF9348_02359	Escherichia coli MS 145-7	784
1763	E1JQA8	E1JQA8_ECOLX	Bacteria	HMPREF9347_04037	Escherichia coli MS 124-1	784
1764	E1JPC2	E1JPC2_9LACO	Bacteria	alaS HMPREF9269_2027	Lactobacillus salivarius ACS-116-V-Col5a	880
1765	E1JZR25	E1JZR25_DESFR	Bacteria	DesfrDRAFT_0394	Desulfovibrio fructosovorans JJ	880
1766	E1KQH6	E1KQH6_9BACT	Bacteria	alaS HMPREF9296_0768	Prevotella disiens FB035-09AN	897
1767	E1KW97	E1KW97_PEPMA	Bacteria	alaS HMPREF9289_0632	Finegoldia magna BVS033A4	873
1768	E1L1R4	E1L1R4_9ACTN	Bacteria	alaS HMPREF9248_1008	Atopobium vaginae PB189-T1-4	883
1769	E1L599	E1L599_9FIRM	Bacteria	alaS HMPREF9321_1395	Veillonella atypica ACS-049-V-Sch6	872
1770	E1LC31	E1LC31_9FIRM	Bacteria	alaS HMPREF9684_0520	Veillonella atypica ACS-134-V-Col7a	872
1771	E1LGP8	E1LGP8_STRMT	Bacteria	alaS SMSK321_0808	Streptococcus mitis SK321	872
1772	E1LKF5	E1LKF5_STRMT	Bacteria	alaS SMSK564_0332	Streptococcus mitis SK564	872
1773	E1LSV6	E1LSV6_STRMT	Bacteria	alaS SMSK597_1065	Streptococcus mitis SK597	872
1774	E1M0I1	E1M0I1_STRMT	Bacteria	alaS SM12261_0137	Streptococcus mitis NCTC 12261	872
1775	E1MAX4	E1MAX4_9STRE	Bacteria	alaS SIN_2092	Streptococcus infantis SK1302	730
1776	E1MDX4	E1MDX4_9ACTO	Bacteria	alaS HMPREF9278_1561	Mobiluncus mulieris FB024-16	894
1777	E1MSU8	E1MSU8_9GAMM	Bacteria	MettuDRAFT_3766	Methylobacter tundripaludum SV96	870
1778	E1N962	E1N962_9BIFI	Bacteria	alaS HMPREF9003_0475	Bifidobacterium dentium JCVIHMP022	892
1779	E1NFL0	E1NFL0_9LACO	Bacteria	alaS HMPREF9214_0023	Lactobacillus iners LactinV 11V1-d	877
1780	E1NKD7	E1NKD7_9LACO	Bacteria	alaS HMPREF9213_0618	Lactobacillus iners LactinV 09V1-c	877
1781	E1NMC2	E1NMC2_9LACO	Bacteria	alaS HMPREF9212_1331	Lactobacillus iners LactinV 03V1-b	877
1782	E1NR63	E1NR63_9LACO	Bacteria	alaS_1_HMPREF9211_0423	Lactobacillus iners LactinV 01V1-a	632
1783	E1NXE0	E1NXE0_9LACO	Bacteria	alaS HMPREF9215_0119	Lactobacillus iners SPIN 2503V10-D	877
1784	E1P4C4	E1P4C4_NEILA	Bacteria	NLY_30680	Neisseria lactamica Y92-1009	874
1785	E1P8P4	E1P8P4_ECOAB	Bacteria	alaS ECABU_c29670	Escherichia coli OR:K5:H- (strain ABU 83972)	876
1786	E1QIT5	E1QIT5_DESB2	Bacteria	Deba_1140	Desulfarculus baarsii (strain ATCC 33931 / DSM 2075 / VKM B-180;	884
1787	E1QVT4	E1QVT4_OLSUV	Bacteria	Olsu_1127	Olsenella uli (strain ATCC 49627 / DSM 7084 / CIP 109912 / JCM 1;	880
1788	E1R5B6	E1R5B6_SPISS	Bacteria	Spirs_3146	Spirochaeta smaragdinae (strain DSM 11293 / JCM 15392 / SEBR 4	597
1789	E1RP27	E1RP27_XYLF6	Bacteria	alaS XFLM_05745	Xylella fastidiosa (strain GB514)	884
1790	E1S200	E1S200_ECOUM	Bacteria	alaS UM146_03110	Escherichia coli (strain UM146)	876
1791	E1SBX6	E1SBX6_PANVC	Bacteria	alaS Pvag_2402	Pantoea vagans (strain C9-1) (Pantoea agglomerans (strain C9-1))	875
1792	E1ST10	E1ST10_FERBD	Bacteria	Fbal_0857	Ferrimonas balearica (strain DSM 9799 / CCM 4581 / PAT)	876
1793	E1T2U6	E1T2U6_THESX	Bacteria	Thet_1414	Thermoanaerobacter sp. (strain X513)	877
1794	E1T4F5	E1T4F5_BURSG	Bacteria	BC1003_2438	Burkholderia sp. (strain CCGE1003)	890
1795	E1TLR1	E1TLR1_LACPS	Bacteria	alaS LPST_C1888	Lactobacillus plantarum (strain ST-III)	880
1796	E1UGL2	E1UGL2_LISML	Bacteria	alaS lmo4a_1560	Listeria monocytogenes serotype 4c (strain L99)	879
1797	E1ULW9	E1ULW9_BACAS	Bacteria	alaS BAMF_2549	Bacillus amyloliquefaciens (strain ATCC 23350 / DSM 7 / NBRC 155	878
1798	E1V8H1	E1V8H1_HALED	Bacteria	alaS HELO_3743	Halomonas elongata (strain ATCC 33173 / DSM 2581 / NBRC 15536	868
1799	E1VIQ9	E1VIQ9_9GAMM	Bacteria	alaS HDN1F_11180	Gamma proteobacterium HdN1	876
1800	E1VWE1	E1VWE1_ARTAR	Bacteria	alaS AARI_17300	Arthrobacter arilaitensis (strain DSM 16368 / CIP 108037 / JCM 13;	896
1801	E1W445	E1W445_HAEP3	Bacteria	PARA_10310	Haemophilus parainfluenzae (strain T3T1)	874
1802	E1WA72	E1WA72_SALTS	Bacteria	alaS SL1344_2807	Salmonella typhimurium (strain SL1344)	876
1803	E1WLF2	E1WLF2_BACF6	Bacteria	alaS BF638R_0731	Bacteroides fragilis (strain 638R)	872
1804	E1XBB8	E1XBB8_HAEI1	Bacteria	HIB_09470	Haemophilus influenzae (strain 10810)	874

1805	E1XH17	E1XH17 STRZO	Bacteria	alaS SPNOXC 12160	Streptococcus pneumoniae serotype 3 (strain OXC141)	872
1806	E1XKH4	E1XKH4 STRZN	Bacteria	alaS SPNINV200 12280	Streptococcus pneumoniae serotype 14 (strain INV200)	872
1807	E1XRW1	E1XRW1 STRZI	Bacteria	alaS INV104 11780	Streptococcus pneumoniae serotype 1 (strain INV104)	872
1808	E1XWP0	E1XWP0 LEGPN	Bacteria	LPW 18301	Legionella pneumophila 130b	860
1809	E1YM14	E1YM14 9DELTA	Bacteria	N47_E46590	Uncultured Desulfobacterium sp.	875
1810	E1YXB9	E1YXB9 9BACE	Bacteria	HMPREF9008_01879	Bacteroides sp. 20_3	873
1811	E2CMI3	E2CMI3 9RHOB	Bacteria	alaS TRICHSKD4 4330	Roseibium sp. TrichSKD4	888
1812	E2JMV0	E2JMV0 BORAF	Bacteria	BafACA1_0224	Borrelia afzelii ACA-1	594
1813	E2JNZ4	E2JNZ4 BORBU	Bacteria	Bbu156a_0657	Borrelia burgdorferi 156a	594
1814	E2JTQ8	E2JTQ8 ECO57	Bacteria	alaS ECH7EC4206_A2138	Escherichia coli O157:H7 str. EC4206	876
1815	E2K7V1	E2K7V1 ECO57	Bacteria	alaS ECH7EC4045_A2255	Escherichia coli O157:H7 str. EC4045	876
1816	E2KSJ2	E2KSJ2 ECO57	Bacteria	alaS ECH74042_A2819	Escherichia coli O157:H7 str. EC4042	876
1817	E2L368	E2L368 BORBU	Bacteria	BBUCA112A_0230	Borrelia burgdorferi CA-11.2A	594
1818	E2MNS0	E2MNS0 FRANO	Bacteria	alaS FTG 1460	Francisella novicida FTG	865
1819	E2MY63	E2MY63_9CORY	Bacteria	alaS CORAM0001_2137	Corynebacterium amycolatum SK46	886
1820	E2N559	E2N559 CAPSP	Bacteria	alaS CAPSP0001_0255	Capnocytophaga sputigena ATCC 33612	877
1821	E2NF82	E2NF82_9BACE	Bacteria	BACCELL 02953	Bacteroides cellulosilyticus DSM 14838	872
1822	E2P0V3	E2P0V3 PASHA	Bacteria	COI_1474	Mannheimia haemolytica serotype A2 str. OVINE	875
1823	E2P765	E2P765 PASHA	Bacteria	COK_0997	Mannheimia haemolytica serotype A2 str. BOVINE	875
1824	E2PDG7	E2PDG7 NEIPO	Bacteria	NEIPOLOT_00642	Neisseria polysaccharea ATCC 43768	873
1825	E2PJE2	E2PJE2 9RHIZ	Bacteria	alaS BIBO2_0135	Brucella sp. BO2	885
1826	E2PV60	E2PV60 STRCL	Bacteria	sya SCLAV_0731	Streptomyces clavuligerus ATCC 27064	889
1827	E2QQE5	E2QQE5 ECOLX	Bacteria	alaS LF82_0058	Escherichia coli	876
1828	E2S1A0	E2S1A0_9CORY	Bacteria	alaS HMPREF0305_10302	Corynebacterium pseudogenitalium ATCC 33035	897
1829	E2S9F4	E2S9F4_9ACTO	Bacteria	alaS HMPREF0063_10594	Aeromicrobium marinum DSM 15272	886
1830	E2SIM1	E2SIM1_9FIRM	Bacteria	HMPREF0983_00860	Erysipelotrichaceae bacterium 3_1_53	875
1831	E2SYT1	E2SYT1_9RALS	Bacteria	HMPREF1004_02281	Ralstonia sp. 5_7_47FAA	880
1832	E2TBU0	E2TBU0_MYCTU	Bacteria	TMBG_01095	Mycobacterium tuberculosis SUMu002	904
1833	E2TPA1	E2TPA1_MYCTU	Bacteria	TMCG_01800	Mycobacterium tuberculosis SUMu003	904
1834	E2U1F6	E2U1F6_MYCTU	Bacteria	TMDG_00269	Mycobacterium tuberculosis SUMu004	904
1835	E2UC56	E2UC56_MYCTU	Bacteria	TMEG_03231	Mycobacterium tuberculosis SUMu005	904
1836	E2UNR2	E2UNR2_MYCTU	Bacteria	TMFG_03783	Mycobacterium tuberculosis SUMu006	904
1837	E2UXQ2	E2UXQ2_MYCTU	Bacteria	TMGG_02318	Mycobacterium tuberculosis SUMu007	904
1838	E2VB72	E2VB72_MYCTU	Bacteria	TMHG_01749	Mycobacterium tuberculosis SUMu008	904
1839	E2VNM0	E2VNM0_MYCTU	Bacteria	TMIG_03342	Mycobacterium tuberculosis SUMu009	904
1840	E2VWV1	E2VWV1_MYCTU	Bacteria	TMJG_01535	Mycobacterium tuberculosis SUMu010	904
1841	E2W818	E2W818_MYCTU	Bacteria	TMKG_02984	Mycobacterium tuberculosis SUMu011	904
1842	E2WK43	E2WK43_MYCTU	Bacteria	TMLG_02283	Mycobacterium tuberculosis SUMu012	904
1843	E2WXR4	E2WXR4 ECOLX	Bacteria	alaS EC182770_3642	Escherichia coli 1827-70	784
1844	E2X9Z6	E2X9Z6_SHIDY	Bacteria	alaS SD1617_2710	Shigella dysenteriae 1617	784
1845	E2XWW0	E2XWW0_PSEFL	Bacteria	alaS PFWH6_4527	Pseudomonas fluorescens WH6	872
1846	E2Y516	E2Y516_ENTFA	Bacteria	HMPREF9504_01506	Enterococcus faecalis TX0102	880
1847	E2YBV2	E2YBV2_ENTFA	Bacteria	HMPREF9493_01043	Enterococcus faecalis DAPTO 516	880
1848	E2YM61	E2YM61_ENTFA	Bacteria	HMPREF9492_01673	Enterococcus faecalis DAPTO 512	880
1849	E2YWZ7	E2YWZ7_ENTFA	Bacteria	HMPREF9512_01877	Enterococcus faecalis TX0635	880
1850	E2Z513	E2Z513_ENTFA	Bacteria	HMPREF9510_01443	Enterococcus faecalis TX0470	880
1851	E2ZDR1	E2ZDR1_9FIRM	Bacteria	HMPREF9429_01566	Megasphaera micronuciformis F0359	868
1852	E2ZN90	E2ZN90_9FIRM	Bacteria	HMPREF9436_03168	Faecalibacterium cf. prausnitzii KLE1255	887
1853	E2ZPR7	E2ZPR7_PSEAE	Bacteria	PA39016_000110083	Pseudomonas aeruginosa 39016	874
1854	E3AR34	E3AR34_9SPHI	Bacteria	MucpaDRAFT_0254	Mucilaginibacter paludis DSM 18603	927
1855	E3B776	E3B776_9MICO	Bacteria	alaS HMPREF0321_1422	Dermaococcus sp. Ellin185	904
1856	E3BNX4	E3BNX4_9VIBR	Bacteria	alaS VIBC2010_15742	Vibrio caribbenticus ATCC BAA-2122	860
1857	E3BSQ0	E3BSQ0_9LACO	Bacteria	alaS HMPREF9216_0525	Lactobacillus iners LEAF 2053A-b	877
1858	E3BVW9	E3BVW9_9LACO	Bacteria	alaS HMPREF9217_1285	Lactobacillus iners LEAF 2052A-d	877
1859	E3C0Q2	E3C0Q2_9LACO	Bacteria	alaS HMPREF9218_1316	Lactobacillus iners LEAF 2062A-h1	877
1860	E3C1R4	E3C1R4_9LACO	Bacteria	alaS HMPREF9219_1141	Lactobacillus iners LEAF 3008A-a	877
1861	E3CAC1	E3CAC1_9LACO	Bacteria	alaS HMPREF9265_0911	Lactobacillus oris PB013-T2-3	886
1862	E3CCF7	E3CCF7_STRPA	Bacteria	alaS HMPREF9626_1355	Streptococcus parasanguinis F0405	872
1863	E3CHH0	E3CHH0_STRDO	Bacteria	alaS HMPREF9176_2051	Streptococcus downei F0415	873
1864	E3CT85	E3CT85_STRVE	Bacteria	alaS HMPREF9192_0367	Streptococcus vestibularis F0396	872
1865	E3CZ79	E3CZ79_9BACT	Bacteria	Apau_1329	Aminomonas paucivorans DSM 12260	880
1866	E3D1E9	E3D1E9_NEIM7	Bacteria	NMBB_1826	Neisseria meningitidis serogroup B (strain alpha710)	885
1867	E3DAT1	E3DAT1_GARV3	Bacteria	alaS HMPREF0421_21093	Gardnerella vaginalis (strain ATCC 14019 / 317)	894
1868	E3DHN5	E3DHN5_ERWSE	Bacteria	alaS EJP617_19410	Erwinia sp. (strain Ejp617)	876
1869	E3DR74	E3DR74_HALPG	Bacteria	Hprae_0826	Halanaerobium praevalens (strain ATCC 33744 / DSM 2228 / GSL)	877
1870	E3DZY5	E3DZY5_BACA1	Bacteria	alaS BATR1942_11420	Bacillus atrophaeus (strain 1942)	878
1871	E3E6G3	E3E6G3_PAEPS	Bacteria	PPSC2_c4082	Paenibacillus polymyxa (strain SC2) (Bacillus polymyxa)	877
1872	E3EM30	E3EM30_BIFBS	Bacteria	alaS BBIF_0832	Bifidobacterium bifidum (strain S17)	892
1873	E3F2D5	E3F2D5_KETVY	Bacteria	alaS EIO_1475	Ketogulonicigenium vulgare (strain Y25)	868
1874	E3FBG4	E3FBG4_CORP9	Bacteria	alaS Cpl119_1153	Corynebacterium pseudotuberculosis (strain I19)	905
1875	E3G6H9	E3G6H9_ENTCS	Bacteria	Entcl_1030	Enterobacter cloacae (strain SCF1)	875
1876	E3GG93	E3GG93_EUBLK	Bacteria	ELI_3742	Eubacterium limosum (strain KIST612)	879
1877	E3GSF2	E3GSF2_HAEI2	Bacteria	alaS R2846_1513	Haemophilus influenzae (strain R2846 / 12)	874
1878	E3H2V8	E3H2V8_ROTDC	Bacteria	alaS HMPREF0733_12004	Rothia dentocariosa (strain ATCC 17931 / CDC X599 / XDIA)	893
1879	E3HB00	E3HB00_ILYPC	Bacteria	Ilyop_0361	Ilyobacter polytropus (strain DSM 2926 / CuHBu1)	868
1880	E3HIR6	E3HIR6_ACHXA	Bacteria	alaS AXYL_02163	Achromobacter xylosoxidans (strain A8)	874
1881	E3IOA9	E3IOA9_RHOVT	Bacteria	Rvan_3023	Rhodomicrobium vannielii (strain ATCC 17100 / ATH 3.1.1 / DSM 11)	894

1882	E3IGH0	E3IGH0 GEOS0	Bacteria	GY4MC1_1011	Geobacillus sp. (strain Y4.1MC1)	877
1883	E3IK70	E3IK70 DESVR	Bacteria	Deval_1006	Desulfovibrio vulgaris (strain RCH1)	879
1884	E3J8Y8	E3J8Y8 FRASU	Bacteria	FraEu11c_1664	Frankia sp. (strain Eu11c)	883
1885	E3JEQ8	E3JEQ8 BUCA0	Bacteria	alaS CWO_02130	Buchnera aphidicola subsp. Acyrthosiphon pisum (strain LL01)	878
1886	E3JGN6	E3JGN6 BUCA3	Bacteria	alaS CWQ_02175	Buchnera aphidicola subsp. Acyrthosiphon pisum (strain TLW03)	878
1887	E3J157	E3J157 BUCAF	Bacteria	alaS CWS_02125	Buchnera aphidicola subsp. Acyrthosiphon pisum (strain JF99)	878
1888	E3JIX6	E3JIX6 BUCAJ	Bacteria	alaS CWU_02620	Buchnera aphidicola subsp. Acyrthosiphon pisum (strain JF98)	878
1889	E3PH61	E3PH61 FCOH1	Bacteria	ETEC_2888	Escherichia coli O78:H11 (strain H10407 / ETEC)	876
1890	E3PRV7	E3PRV7 CLOSD	Bacteria	alaS CLOST_1491	Clostridium sticklandii (strain ATCC 12662 / DSM 519 / JCM 1433 /	882
1891	E3R4K0	E3R4K0_9LACO	Bacteria	LBKG_01278	Lactobacillus crispatus CTV-05	879
1892	E3RBS7	E3RBS7_9LACO	Bacteria	LBGG_00877	Lactobacillus gasseri MV-22	882
1893	E3XKA7	E3XKA7_ECOLX	Bacteria	alaS EC236275_1420	Escherichia coli 2362-75	784
1894	E3Y5L1	E3Y5L1_SHIFL	Bacteria	alaS SF2457T_3349	Shigella flexneri 2a str. 2457T	784
1895	E3YGF7	E3YGF7_LISMO	Bacteria	NT04LM_2287	Listeria monocytogenes FSL F2-208	879
1896	E3YQF1	E3YQF1_9LIST	Bacteria	NT05LM_1773	Listeria marthii FSL S4-120	864
1897	E3Z7S8	E3Z7S8_LISIN	Bacteria	NT06LI_1685	Listeria innocua FSL J1-023	879
1898	E3ZGP1	E3ZGP1_LISTV	Bacteria	NT05LI_1855	Listeria ivanovii FSL F6-596	879
1899	E3ZZK4	E3ZZK4_LISSE	Bacteria	NT04LS_1743	Listeria seeligeri FSL S4-171	879
1900	E4A968	E4A968_PROAC	Bacteria	HMPREF9573_02063	Propionibacterium acnes HL072PA2	892
1901	E4ABK6	E4ABK6_PROAC	Bacteria	HMPREF9622_00333	Propionibacterium acnes HL037PA3	892
1902	E4AP01	E4AP01_PROAC	Bacteria	HMPREF9613_01764	Propionibacterium acnes HL002PA1	892
1903	E4AV17	E4AV17_PROAC	Bacteria	HMPREF9609_01391	Propionibacterium acnes HL027PA1	892
1904	E4B4J0	E4B4J0_PROAC	Bacteria	HMPREF9606_02080	Propionibacterium acnes HL036PA3	892
1905	E4BB98	E4BB98_PROAC	Bacteria	HMPREF9577_01891	Propionibacterium acnes HL110PA3	428
1906	E4BDM0	E4BDM0_PROAC	Bacteria	HMPREF9621_00313	Propionibacterium acnes HL037PA2	892
1907	E4BQM6	E4BQM6_PROAC	Bacteria	HMPREF9617_01434	Propionibacterium acnes HL056PA1	892
1908	E4C014	E4C014_PROAC	Bacteria	HMPREF9616_02213	Propionibacterium acnes HL007PA1	892
1909	E4C6F5	E4C6F5_PROAC	Bacteria	HMPREF9611_02089	Propionibacterium acnes HL063PA1	892
1910	E4CDU4	E4CDU4_PROAC	Bacteria	HMPREF9604_02105	Propionibacterium acnes HL036PA1	892
1911	E4CKY1	E4CKY1_PROAC	Bacteria	HMPREF9591_01991	Propionibacterium acnes HL086PA1	892
1912	E4CST2	E4CST2_PROAC	Bacteria	HMPREF9587_01599	Propionibacterium acnes HL025PA1	892
1913	E4D1V1	E4D1V1_PROAC	Bacteria	HMPREF9612_02381	Propionibacterium acnes HL063PA2	892
1914	E4D7P5	E4D7P5_PROAC	Bacteria	HMPREF9605_01817	Propionibacterium acnes HL036PA2	892
1915	E4DDN9	E4DDN9_PROAC	Bacteria	HMPREF9593_01395	Propionibacterium acnes HL046PA2	892
1916	E4DJY4	E4DJY4_PROAC	Bacteria	HMPREF9589_00986	Propionibacterium acnes HL059PA1	892
1917	E4DSR0	E4DSR0_PROAC	Bacteria	HMPREF9580_01502	Propionibacterium acnes HL087PA2	892
1918	E4E1S0	E4E1S0_PROAC	Bacteria	HMPREF9576_01859	Propionibacterium acnes HL110PA2	892
1919	E4E8E2	E4E8E2_PROAC	Bacteria	HMPREF9574_01615	Propionibacterium acnes HL074PA1	892
1920	E4EGL8	E4EGL8_PROAC	Bacteria	HMPREF9566_02218	Propionibacterium acnes HL045PA1	892
1921	E4EQG7	E4EQG7_PROAC	Bacteria	HMPREF9585_02337	Propionibacterium acnes HL083PA1	892
1922	E4EXC6	E4EXC6_PROAC	Bacteria	HMPREF9564_02222	Propionibacterium acnes HL053PA1	892
1923	E4F3U1	E4F3U1_PROAC	Bacteria	HMPREF9575_01972	Propionibacterium acnes HL110PA1	892
1924	E4F9S0	E4F9S0_PROAC	Bacteria	HMPREF9567_01145	Propionibacterium acnes HL013PA1	892
1925	E4FK09	E4FK09_PROAC	Bacteria	HMPREF9620_02328	Propionibacterium acnes HL037PA1	892
1926	E4FRY7	E4FRY7_PROAC	Bacteria	HMPREF9618_01968	Propionibacterium acnes HL082PA1	892
1927	E4FY44	E4FY44_PROAC	Bacteria	HMPREF9600_02070	Propionibacterium acnes HL050PA3	892
1928	E4G434	E4G434_PROAC	Bacteria	HMPREF9598_01414	Propionibacterium acnes HL050PA1	892
1929	E4GAU9	E4GAU9_PROAC	Bacteria	HMPREF9596_01042	Propionibacterium acnes HL005PA3	892
1930	E4GFY4	E4GFY4_PROAC	Bacteria	HMPREF9595_00431	Propionibacterium acnes HL005PA2	892
1931	E4GSR5	E4GSR5_PROAC	Bacteria	HMPREF9594_02007	Propionibacterium acnes HL005PA1	892
1932	E4GX54	E4GX54_PROAC	Bacteria	HMPREF9619_00563	Propionibacterium acnes HL082PA2	892
1933	E4H796	E4H796_PROAC	Bacteria	HMPREF9614_01922	Propionibacterium acnes HL002PA2	892
1934	E4HBS4	E4HBS4_PROAC	Bacteria	HMPREF9608_00931	Propionibacterium acnes HL067PA1	892
1935	E4HNY2	E4HNY2_PROAC	Bacteria	HMPREF9607_02486	Propionibacterium acnes HL044PA1	892
1936	E4HSU3	E4HSU3_PROAC	Bacteria	HMPREF9603_01121	Propionibacterium acnes HL001PA1	892
1937	E4I117	E4I117_PROAC	Bacteria	HMPREF9597_01270	Propionibacterium acnes HL005PA4	892
1938	E4IB07	E4IB07_ENTFC	Bacteria	HMPREF9525_02348	Enterococcus faecium TX0133a04	880
1939	E4IFQ5	E4IFQ5_ENTFC	Bacteria	HMPREF9527_00880	Enterococcus faecium TX0133C	880
1940	E4IPE3	E4IPE3_ENTFC	Bacteria	HMPREF9522_00847	Enterococcus faecium TX0082	880
1941	E4J009	E4J009_ENTFC	Bacteria	HMPREF9523_01741	Enterococcus faecium TX0133A	880
1942	E4J5X6	E4J5X6_ENTFC	Bacteria	HMPREF9526_00676	Enterococcus faecium TX0133B	880
1943	E4JFG3	E4JFG3_ENTFC	Bacteria	HMPREF9524_00909	Enterococcus faecium TX0133a01	880
1944	E4K390	E4K390_9FIRM	Bacteria	CallaDRAFT_0178	Caldicellulosiruptor lactoaceticus 6A	883
1945	E4KIG0	E4KIG0_9SPHI	Bacteria	PedsaDRAFT_2697	Pedobacter saltans DSM 12145	880
1946	E4KP16	E4KP16_9LACT	Bacteria	alaS HMPREF9257_1299	Eremococcus coleocola ACS-139-V-Col8	883
1947	E4KVP1	E4KVP1_9PORP	Bacteria	alaS HMPREF9294_1209	Porphyromonas asaccharolytica PR426713P-I	871
1948	E4KXY9	E4KXY9_9FIRM	Bacteria	alaS HMPREF9286_1396	Peptoniphilus harei ACS-146-V-Sch2b	870
1949	E4L5G0	E4L5G0_9STRE	Bacteria	alaS HMPREF9320_0437	Streptococcus pseudoporcinus SPIN 20026	873
1950	E4L865	E4L865_9FIRM	Bacteria	alaS HMPREF9220_1047	Dialister microaerophilus UPII 345-E	869
1951	E4LBR2	E4LBR2_9FIRM	Bacteria	alaS HMPREF9199_1221	Veillonella sp. oral taxon 158 str. F0412	871
1952	E4LJ35	E4LJ35_9FIRM	Bacteria	alaS HMPREF9162_1563	Selenomonas sp. oral taxon 137 str. F0430	875
1953	E4LNX2	E4LNX2_9CLOT	Bacteria	alaS HMPREF9406_1854	Clostridium sp. HGF2	875
1954	E4M306	E4M306_9FIRM	Bacteria	ThesuDRAFT_1358	Thermoerobacter subterraneus DSM 13965	905
1955	E4MDR4	E4MDR4_9BACT	Bacteria	alaS HMPREF9720_1084	Alistipes sp. HGB5	873
1956	E4MG37	E4MG37_9FIRM	Bacteria	EubceDRAFT_0137	Eubacterium cellulosolvens 6	897
1957	E4MRE4	E4MRE4_CAPOC	Bacteria	alaS HMPREF1977_1008	Capnocytophaga ochracea F0287	877
1958	E4N7R9	E4N7R9_KITSK	Bacteria	alaS KSE_14220	Kitasatospora setae (strain ATCC 33774 / DSM 43861 / JCM 3304 /	888



1959	E4P1B4	E4P1B4 BIFBP	Bacteria	alaS BBPR_0801	Bifidobacterium bifidum (strain PRL2010)	892
1960	E4P4G4	E4P4G4 ECO8N	Bacteria	alaS NRG857_13190	Escherichia coli O83:H1 (strain NRG 857C / AIEC)	876
1961	E4PIK8	E4PIK8 MARAH	Bacteria	HP15_1319	Marinobacter adhaerens (strain HP15)	876
1962	E4Q1F1	E4Q1F1 CALOW	Bacteria	Calow_1123	Caldicellulosiruptor owensensis (strain ATCC 700167 / DSM 13100)	879
1963	E4QAT4	E4QAT4_CALH1	Bacteria	Calhy_1395	Caldicellulosiruptor hydrothermalis (strain DSM 18901 / VKM B-241)	881
1964	E4QGU1	E4QGU1 BORBN	Bacteria	BbuN40_0220	Borrelia burgdorferi (strain N40)	594
1965	E4QL71	E4QL71 METS6	Bacteria	alaS MPQ_2141	Methylovorus sp. (strain MP688)	874
1966	E4QWT8	E4QWT8_HAEI6	Bacteria	alaS R2866_1579	Haemophilus influenzae (strain R2866)	874
1967	E4R451	E4R451 BIFLM	Bacteria	alaS BBMN68_621	Bifidobacterium longum subsp. longum (strain BBMN68)	893
1968	E4RAY6	E4RAY6_PSEPB	Bacteria	alaS PPUBIRD1_1429	Pseudomonas putida (strain BIRD-1)	874
1969	E4RLH4	E4RLH4 HALSL	Bacteria	Halsa_1461	Halanaerobium sp. (strain sapolanicus)	877
1970	E4RZ44	E4RZ44_LEAB4	Bacteria	Lbys_3514	Leadbetterella byssohila (strain DSM 17132 / KACC 11308 / 4M15)	887
1971	E4S149	E4S149 BORBJ	Bacteria	BbuJD1_0220	Borrelia burgdorferi (strain JD1)	594
1972	E4S7T4	E4S7T4_CALKI	Bacteria	Calkr_1318	Caldicellulosiruptor kristjanssonii (strain ATCC 700853 / DSM 1213)	883
1973	E4SBV3	E4SBV3_CALK2	Bacteria	Calkro_1370	Caldicellulosiruptor kronotskyensis (strain DSM 18902 / VKM B-241)	883
1974	E4SLG6	E4SLG6_LACAR	Bacteria	alaS LA2_02165	Lactobacillus amylovorus (strain GRL 1112)	879
1975	E4SSE6	E4SSE6_STRTN	Bacteria	STND_0455	Streptococcus thermophilus (strain ND03)	872
1976	E4SW84	E4SW84_LACDN	Bacteria	alaS LDBND_1515	Lactobacillus delbrueckii subsp. bulgaricus (strain ND02)	877
1977	E4T7X4	E4T7X4_PALPW	Bacteria	Palpr_2688	Paludibacter propionigenes (strain DSM 17365 / JCM 13257 / WB)	869
1978	E4TD51	E4TD51_RIEAD	Bacteria	Riean_1553	Riemerella anatipestifer (strain ATCC 11845 / DSM 15868 / JCM 95)	867
1979	E4TGX8	E4TGX8_CALNY	Bacteria	Calni_0827	Calditerrivibrio nitroreducens (strain DSM 19672 / NBRC 101217 / )	873
1980	E4TSU6	E4TSU6_MARTH	Bacteria	Ftrac_2911	Marivirga tractuosa (strain ATCC 23168 / DSM 4126 / NBRC 15989)	876
1981	E4TWP2	E4TWP2_SULKY	Bacteria	Sulku_2228	Sulfuricurvum kujjense (strain ATCC BAA-921 / DSM 16994 / JCM 1)	851
1982	E4U9W3	E4U9W3_OCEP5	Bacteria	Ocepr_1825	Oceanithermus profundus (strain DSM 14977 / NBRC 100410 / VKM)	895
1983	E4UDT5	E4UDT5_LIBSC	Bacteria	CKC_05080	Liberibacter solanacearum (strain Clso-ZC1)	906
1984	E4V9A4	E4V9A4_BIFBI	Bacteria	BBNG_00743	Bifidobacterium bifidum NCIMB 41171	892
1985	E4VTU5	E4VTU5_BACFR	Bacteria	BFAG_00101	Bacteroides fragilis 3_1_12	872
1986	E4WZ9	E4WZ9_RHOE1	Bacteria	alaS REQ_21510	Rhodococcus equi (strain 103S) (Corynebacterium equi)	890
1987	E4ZC47	E4ZC47_NEILO	Bacteria	alaS NLA_6900	Neisseria lactamica (strain 020-06)	874
1988	E5AIY8	E5AIY8_CHLPS	Bacteria	Cpsi_8581	Chlamydomphila psittaci RD1	875
1989	E5AP78	E5AP78_BURRH	Bacteria	RBRH_01067	Burkholderia rhizoxinica (strain DSM 19002 / CIP 109453 / HKI 45)	893
1990	E5B2F8	E5B2F8_ERWAM	Bacteria	alaS EAIL5_0840	Erwinia amylovora ATCC BAA-2158	833
1991	E5BHH0	E5BHH0_9FUSO	Bacteria	FSBG_01440	Fusobacterium sp. 3_1_5R	866
1992	E5BJR9	E5BJR9_9FUSO	Bacteria	FSEG_00349	Fusobacterium sp. D12	866
1993	E5BQM4	E5BQM4_9FUSO	Bacteria	FUAG_00312	Fusobacterium ulcerans ATCC 49185	866
1994	E5C1I1	E5C1I1_9FUSO	Bacteria	FGAG_00925	Fusobacterium gonidiaformans ATCC 25563	866
1995	E5C6V0	E5C6V0_9BACE	Bacteria	BSGG_1565	Bacteroides sp. D2	872
1996	E5CM53	E5CM53_STAHO	Bacteria	HMPREF0798_00179	Staphylococcus hominis subsp. hominis C80	876
1997	E5CRW5	E5CRW5_9STAP	Bacteria	HMPREF0786_00693	Staphylococcus caprae C87	876
1998	E5QUJ7	E5QUJ7_STAAH	Bacteria	alaS HMPREF0772_11523	Staphylococcus aureus (strain TCH60)	877
1999	E5R6Q2	E5R6Q2_STAAG	Bacteria	alaS ECTR2_1467	Staphylococcus aureus (strain ECT-R 2)	876
2000	E5TAF2	E5TAF2_STAUA	Bacteria	CGSSa00_07625	Staphylococcus aureus subsp. aureus CGS00	876
2001	E5TI12	E5TI12_STAUA	Bacteria	CGSSa01_09194	Staphylococcus aureus subsp. aureus CGS01	876
2002	E5TVE2	E5TVE2_STAUA	Bacteria	CGSSa03_02408	Staphylococcus aureus subsp. aureus CGS03	876
2003	E5UAA8	E5UAA8_ALCXX	Bacteria	HMPREF0005_01961	Achromobacter xylosoxidans C54	874
2004	E5UIB6	E5UIB6_NEIMU	Bacteria	HMPREF0604_00461	Neisseria mucosa C102	964
2005	E5V0C0	E5V0C0_9BACE	Bacteria	HMPREF9011_04395	Bacteroides sp. 3_1_40A	871
2006	E5V1B8	E5V1B8_9BACL	Bacteria	HMPREF0432_00164	Gemella morbillum M424	863
2007	E5VEX2	E5VEX2_9BACE	Bacteria	HMPREF1007_03308	Bacteroides sp. 4_1_36	872
2008	E5VHW1	E5VHW1_9FIRM	Bacteria	HMPREF0996_00661	Lachnospiraceae bacterium 5_1_63FAA	765
2009	E5VU08	E5VU08_9FIRM	Bacteria	HMPREF1011_01482	Anaerostipes sp. 3_2_56FAA	879
2010	E5VZM3	E5VZM3_9BACI	Bacteria	HMPREF1012_00076	Bacillus sp. BT1B_CT2	878
2011	E5WIIW5	E5WIIW5_9BACI	Bacteria	HMPREF1013_02397	Bacillus sp. 2_A_57_CT2	877
2012	E5WXT2	E5WXT2_9BACE	Bacteria	HMPREF1016_01443	Bacteroides eggerthii 1_2_48FAA	873
2013	E5XBG1	E5XBG1_9ACTN	Bacteria	HMPREF1023_02402	Eggerthella sp. 1_3_56FAA	878
2014	E5XE67	E5XE67_9FIRM	Bacteria	HMPREF1026_00420	Lachnospiraceae bacterium 8_1_57FAA	880
2015	E5XP45	E5XP45_9ACTO	Bacteria	HMPREF9336_01266	Segniliparus rugosus ATCC BAA-974	830
2016	E5XXC7	E5XXC7_9BIFI	Bacteria	HMPREF0177_00630	Bifidobacterium sp. 12_1_47BFAA	893
2017	E5Y3I3	E5Y3I3_BILWA	Bacteria	HMPREF0179_00744	Bilophila wadsworthia 3_1_6	884
2018	E5YKU4	E5YKU4_9ENTR	Bacteria	HMPREF0864_03142	Enterobacteriaceae bacterium 9_2_54FAA	875
2019	E5YUN5	E5YUN5_9BACL	Bacteria	PVOR_10139	Paenibacillus vortex V453	875
2020	E5ZNV1	E5ZNV1_ECOLX	Bacteria	HMPREF9539_00818	Escherichia coli MS 110-3	784
2021	E6A7B2	E6A7B2_ECOLX	Bacteria	HMPREF9544_01898	Escherichia coli MS 153-1	784
2022	E6ANR7	E6ANR7_ECOLX	Bacteria	HMPREF9545_02250	Escherichia coli MS 16-3	784
2023	E6BAN4	E6BAN4_ECOLX	Bacteria	alaS EC3431_4689	Escherichia coli 3431	784
2024	E6BMP5	E6BMP5_ECOLX	Bacteria	HMPREF9350_03669	Escherichia coli MS 85-1	784
2025	E6BZ51	E6BZ51_PROAC	Bacteria	HMPREF9590_00907	Propionibacterium acnes HL059PA2	892
2026	E6C770	E6C770_PROAC	Bacteria	HMPREF9602_01768	Propionibacterium acnes HL030PA2	892
2027	E6CFJ0	E6CFJ0_PROAC	Bacteria	HMPREF9601_02232	Propionibacterium acnes HL030PA1	892
2028	E6CLK2	E6CLK2_PROAC	Bacteria	HMPREF9599_00842	Propionibacterium acnes HL050PA2	892
2029	E6CU86	E6CU86_PROAC	Bacteria	HMPREF9583_02023	Propionibacterium acnes HL038PA1	892
2030	E6D2T9	E6D2T9_PROAC	Bacteria	HMPREF9582_01294	Propionibacterium acnes HL060PA1	892
2031	E6D4W8	E6D4W8_PROAC	Bacteria	HMPREF9578_00125	Propionibacterium acnes HL110PA4	892
2032	E6DFQ6	E6DFQ6_PROAC	Bacteria	HMPREF9615_01787	Propionibacterium acnes HL002PA3	892
2033	E6DJX7	E6DJX7_PROAC	Bacteria	HMPREF9610_00431	Propionibacterium acnes HL027PA2	892
2034	E6DVB7	E6DVB7_PROAC	Bacteria	HMPREF9565_01751	Propionibacterium acnes HL053PA2	892
2035	E6E2E1	E6E2E1_PROAC	Bacteria	HMPREF9572_01305	Propionibacterium acnes HL072PA1	892



2036	E6EA11	E6EA11 PROAC	Bacteria	HMPREF9569_01767	Propionibacterium acnes HL078PA1	892
2037	E6EGT7	E6EGT7 PROAC	Bacteria	HMPREF9592_02098	Propionibacterium acnes HL046PA1	892
2038	E6EN32	E6EN32_ENTFA	Bacteria	HMPREF9496_01100	Enterococcus faecalis TX4000	880
2039	E6EX11	E6EX11_ENTFA	Bacteria	HMPREF9511_01528	Enterococcus faecalis TX0630	880
2040	E6F6T3	E6F6T3_ENTFA	Bacteria	HMPREF9502_01384	Enterococcus faecalis TX0031	880
2041	E6FEQ9	E6FEQ9_ENTFA	Bacteria	HMPREF9497_01383	Enterococcus faecalis TX4244	880
2042	E6FKV9	E6FKV9_ENTFA	Bacteria	HMPREF9519_00628	Enterococcus faecalis TX1346	880
2043	E6FYM6	E6FYM6_ENTFA	Bacteria	HMPREF9518_02303	Enterococcus faecalis TX1342	880
2044	E6G6B8	E6G6B8_ENTFA	Bacteria	HMPREF9516_02203	Enterococcus faecalis TX1302	880
2045	E6GCZ9	E6GCZ9_ENTFA	Bacteria	HMPREF9503_01644	Enterococcus faecalis TX0043	880
2046	E6GGY4	E6GGY4_ENTFA	Bacteria	HMPREF9501_00177	Enterococcus faecalis TX0027	880
2047	E6GZ80	E6GZ80_ENTFA	Bacteria	HMPREF9506_03149	Enterococcus faecalis TX0309A	880
2048	E6H1M3	E6H1M3_ENTFA	Bacteria	HMPREF9507_00736	Enterococcus faecalis TX0309B	880
2049	E6H931	E6H931_ENTFA	Bacteria	HMPREF9500_00137	Enterococcus faecalis TX0017	880
2050	E6HJY1	E6HJY1_ENTFA	Bacteria	HMPREF9494_00867	Enterococcus faecalis TX2137	880
2051	E6HWX1	E6HWX1_ENTFA	Bacteria	HMPREF9508_02091	Enterococcus faecalis TX0312	880
2052	E6I238	E6I238_ENTFA	Bacteria	HMPREF9499_01322	Enterococcus faecalis TX0012	880
2053	E6IFU3	E6IFU3_ENTFA	Bacteria	HMPREF9513_03199	Enterococcus faecalis TX0645	880
2054	E6INQ2	E6INQ2_ENTFA	Bacteria	HMPREF9517_02675	Enterococcus faecalis TX1341	880
2055	E6IRQ9	E6IRQ9_ENTFA	Bacteria	HMPREF9495_00650	Enterococcus faecalis TX2141	880
2056	E6J012	E6J012_STRAP	Bacteria	HMPREF0813_00582	Streptococcus anginosus F0211	872
2057	E6J4N3	E6J4N3_9ACTO	Bacteria	alaS ES5_00802	Dietzia cinnamea P4	859
2058	E6J142	E6J142_RIFAN	Bacteria	alaS RAYM_05181	Riemerella anatipestifer RA-YM	867
2059	E6JMN3	E6JMN3_STAEP	Bacteria	alaS GSEF_0918	Staphylococcus epidermidis FRI909	876
2060	E6JSM6	E6JSM6_9SPTO	Bacteria	SpithDRAFT_0390	Spirochaeta thermophila DSM 6578	603
2061	E6K1S1	E6K1S1_PARDN	Bacteria	alaS HMPREF0620_0757	Parascardovia denticolens DSM 10105	903
2062	E6K747	E6K747_9BACT	Bacteria	alaS HMPREF6485_1433	Prevotella buccae ATCC 33574	881
2063	E6KN84	E6KN84_STRSA	Bacteria	alaS HMPREF8578_1699	Streptococcus sanguinis ATCC 49296	874
2064	E6KQ13	E6KQ13_9ACTO	Bacteria	ppx HMPREF9006_0144	Actinomyces sp. oral taxon 180 str. F0310	901
2065	E6L035	E6L035_9PAST	Bacteria	alaS HMPREF9064_1767	Aggregatibacter segnis ATCC 33393	874
2066	E6L455	E6L455_9PROT	Bacteria	alaS HMPREF9401_1231	Arcobacter butzleri JV22	851
2067	E6LFZ7	E6LFZ7_9ENTE	Bacteria	alaS HMPREF9088_1287	Enterococcus italicus DSM 15952	880
2068	E6LP14	E6LP14_9FIRM	Bacteria	alaS HMPREF0381_1869	Eubacterium saburreum DSM 3986	885
2069	E6LSP2	E6LSP2_9LACO	Bacteria	alaS HMPREF9223_0023	Lactobacillus iners ATCC 55195	906
2070	E6LZA7	E6LZA7_9ACTO	Bacteria	alaS HMPREF0388_1194	Mobiluncus curtisii ATCC 51333	895
2071	E6M2R2	E6M2R2_9ACTO	Bacteria	alaS HMPREF0576_0617	Mobiluncus curtisii subsp. holmesii ATCC 35242	895
2072	E6M719	E6M719_STALU	Bacteria	alaS HMPREF0790_0194	Staphylococcus lugdunensis M23590	876
2073	E6MG87	E6MG87_9FIRM	Bacteria	alaS HMP0721_1020	Pseudoramibacter alactolyticus ATCC 23263	882
2074	E6MSJ0	E6MSJ0_9BACT	Bacteria	alaS HMPREF9420_2458	Prevotella salivae DSM 15606	916
2075	E6N037	E6N037_NEIME	Bacteria	alaS NMH_2217	Neisseria meningitidis H44/76	874
2076	E6RLU7	E6RLU7_PSEU9	Bacteria	alaS PSM_A0579	Pseudoalteromonas sp. (strain SM9913)	866
2077	E6S8W3	E6S8W3_INTC7	Bacteria	Intca_1587	Intrasporangium calvum (strain ATCC 23552 / DSM 43043 / JCM 30	890
2078	E6SLA5	E6SLA5_THEM7	Bacteria	Tmar_1223	Thermaerobacter marianensis (strain ATCC 700841 / DSM 12885 /	905
2079	E6STI0	E6STI0_BACT6	Bacteria	Bache_1244	Bacteroides helcogenes (strain ATCC 35417 / DSM 20613 / JCM 62	872
2080	E6T8S5	E6T8S5_SHEB6	Bacteria	Sbal678_3274	Shewanella baltica (strain OS678)	874
2081	E6TFC4	E6TFC4_MYCSR	Bacteria	Mspyr1_31040	Mycobacterium sp. (strain Spyr1)	898
2082	E6TVA4	E6TVA4_BACCJ	Bacteria	Bcell_1525	Bacillus cellulolyticus (strain ATCC 21833 / DSM 2522 / FERM P-1	878
2083	E6U3K9	E6U3K9_ETHHY	Bacteria	Ethha_2092	Ethanoligenens harbinense (strain DSM 18485 / JCM 12961 / CGMC	874
2084	E6UAG2	E6UAG2_RUMA7	Bacteria	Rumal_1886	Ruminococcus albus (strain ATCC 27210 / DSM 20455 / JCM 14654	885
2085	E6UYF9	E6UYF9_VARPD	Bacteria	Varpa_3599	Variovorax paradoxus EPS	874
2086	E6VIB4	E6VIB4_RHOPX	Bacteria	RpdX1_1502	Rhodopseudomonas palustris (strain DX-1)	890
2087	E6VWW9	E6VWW9_DESAO	Bacteria	Daes_2735	Desulfovibrio aespoensis (strain ATCC 700646 / DSM 10631 / Asp	879
2088	E6W1T2	E6W1T2_DESIS	Bacteria	Selin_0720	Desulfurispirillum indicum (strain ATCC BAA-1389 / S5)	893
2089	E6WG81	E6WG81_PANSA	Bacteria	Pat9b_3062	Pantoea sp. (strain At-9b)	875
2090	E6WRS4	E6WRS4_PSEU0	Bacteria	Psesu_1023	Pseudoxanthomonas suwonensis (strain 11-1)	882
2091	E6XET4	E6XET4_CELAD	Bacteria	Celal_0802	Cellulophaga algicola (strain DSM 14237 / IC166 / ACAM 630)	871
2092	E6XID6	E6XID6_SHEP2	Bacteria	Sput200_2883	Shewanella putrefaciens (strain 200)	874
2093	E6YIA1	E6YIA1_BARCL	Bacteria	alaS BARCL_0908	Bartonella clarridgeiae	887
2094	E6YM96	E6YM96_9RHIZ	Bacteria	alaS BARRO_50347	Bartonella rochalimae ATCC BAA-1498	887
2095	E6YRL3	E6YRL3_9RHIZ	Bacteria	alaS BAR15_130068	Bartonella sp. AR 15-3	889
2096	E6YW08	E6YW08_9RHIZ	Bacteria	alaS B11C_110657	Bartonella sp. 1-1C	887
2097	E6YZV5	E6YZV5_9RHIZ	Bacteria	alaS B11C_40248	Bartonella schoenbuchensis R1	889
2098	E7A685	E7A685_HAEIF	Bacteria	HIBPF14940	Haemophilus influenzae F3031	874
2099	E7AB19	E7AB19_HELFC	Bacteria	alaS Hfelis_06950	Helicobacter felis (strain ATCC 49179 / NCTC 12436 / CS1)	872
2100	E7AE41	E7AE41_HAEIF	Bacteria	HICON_05900	Haemophilus influenzae F3047	874
2101	E7B0W3	E7B0W3_YERE1	Bacteria	Y11_22161	Yersinia enterocolitica subsp. palearctica serotype O:3 (strain DSM	875
2102	E7BJ36	E7BJ36_NEIMW	Bacteria	alaS NMAA_1274	Neisseria meningitidis serogroup A (strain WUE 2594)	885
2103	O07438	SYA_MYCTU	Bacteria	alaS Rv2555c MT2632 MTC	Mycobacterium tuberculosis	904
2104	O34526	SYA_BACSU	Bacteria	alaS BSU27410	Bacillus subtilis	878
2105	O51238	SYA_BORBU	Bacteria	alaS BB_0220	Borrelia burgdorferi (Lyme disease spirochete)	594
2106	O67323	SYA_AQUAE	Bacteria	alaS aq_1293	Aquifex aeolicus	867
2107	O83980	SYA_TREPA	Bacteria	alaS TP_1017	Treponema pallidum	605
2108	O84754	SYA_CHLTR	Bacteria	alaS CT_749	Chlamydia trachomatis	875
2109	P00957	SYA_ECOLI	Bacteria	alaS lovB b2697 JW2667	Escherichia coli (strain K12)	876
2110	P27866	SYA_RHIME	Bacteria	alaS R01798 SMC00475	Rhizobium meliloti (Sinorhizobium meliloti)	887
2111	P43815	SYA_HAEIN	Bacteria	alaS HI_0814	Haemophilus influenzae	874
2112	P57483	SYA_BUCAI	Bacteria	alaS BU403	Buchnera aphidicola subsp. Acyrthosiphon pisum (Acyrthosiphon pi	878

2113	P57933	SYA PASMU	Bacteria	alaS PM1287	Pasteurella multocida	874
2114	P59420	SYA BUCBP	Bacteria	alaS bbb_364	Buchnera aphidicola subsp. Baizongia pistaciae (strain Bp)	880
2115	P61697	SYA BACC1	Bacteria	alaS BCE_4471	Bacillus cereus (strain ATCC 10987)	880
2116	P61698	SYA BDEBA	Bacteria	alaS Bd0501	Bdellovibrio bacteriovorus	907
2117	P61699	SYA CORDI	Bacteria	alaS DIP1350	Corynebacterium diphtheriae	888
2118	P61700	SYA DESVH	Bacteria	alaS DVU_1089	Desulfovibrio vulgaris (strain Hildenborough / ATCC 29579 / NCIMB)	879
2119	P61701	SYA GEOSL	Bacteria	alaS GSU0148	Geobacter sulfurreducens	875
2120	P61702	SYA LACJO	Bacteria	alaS LJ_0474	Lactobacillus johnsonii	882
2121	P61704	SYA MYCMS	Bacteria	alaS MSC_0178	Mycoplasma mycoides subsp. mycoides SC	896
2122	P61705	SYA MYCPA	Bacteria	alaS MAP_1077	Mycobacterium paratuberculosis	900
2123	P61706	SYA RHOPA	Bacteria	alaS RPA3847	Rhodopseudomonas palustris	889
2124	P61707	SYA THET2	Bacteria	alaS TT_C1480	Thermus thermophilus (strain HB27 / ATCC BAA-163 / DSM 7039)	882
2125	P61708	SYA TREDE	Bacteria	alaS TDE_1659	Treponema denticola	600
2126	P61709	SYA WOLPM	Bacteria	alaS WD_0862	Wolbachia pipientis wMel	877
2127	P67008	SYA BRUME	Bacteria	alaS BMEI0789	Brucella melitensis	885
2128	P67009	SYA BRUSU	Bacteria	alaS BR1201	Brucella suis	885
2129	P67010	SYA STAAM	Bacteria	alaS SAV1618	Staphylococcus aureus (strain Mu50 / ATCC 700699)	876
2130	P67011	SYA STAAN	Bacteria	alaS SA1446	Staphylococcus aureus (strain N315)	876
2131	P70865	SYA BARBA	Bacteria	alaS	Bartonella bacilliformis	886
2132	P74423	SYA SYN3	Bacteria	alaS sl0362	Synechocystis sp. (strain ATCC 27184 / PCC 6803 / N-1)	877
2133	P74941	SYA THET8	Bacteria	alaS TTHA1831	Thermus thermophilus (strain HB8 / ATCC 27634 / DSM 579)	882
2134	Q01XA0	SYA SOLUE	Bacteria	alaS Acid_4756	Solibacter usitatus (strain Ellin6076)	878
2135	Q02I63	SYA PSEAB	Bacteria	alaS PA14_52600	Pseudomonas aeruginosa (strain UCBPPP-PA14)	874
2136	Q02XE9	SYA LACLS	Bacteria	alaS LACR_1887	Lactococcus lactis subsp. cremoris (strain SK11)	872
2137	Q03B02	SYA LACCP3	Bacteria	alaS LSEI_0784	Lactobacillus casei (strain ATCC 334)	881
2138	Q03ER8	SYA PEDPA	Bacteria	alaS PEPE_1263	Pediococcus pentosaceus (strain ATCC 25745 / 183-1w)	881
2139	Q03LZ8	SYA STRTD	Bacteria	alaS STER_0493	Streptococcus thermophilus (strain ATCC BAA-491 / LMD-9)	872
2140	Q03R43	SYA LACBA	Bacteria	alaS LVIS_1223	Lactobacillus brevis (strain ATCC 367 / JCM 1170)	879
2141	Q03YQ2	SYA LEUMM	Bacteria	alaS LEUM_0556	Leuconostoc mesenteroides subsp. mesenteroides (strain ATCC 825)	893
2142	Q045P6	SYA LACGA	Bacteria	alaS LGAS_0421	Lactobacillus gasserii (strain ATCC 33323 / DSM 20243)	882
2143	Q048Z3	SYA LACDB	Bacteria	alaS LBUL_1486	Lactobacillus delbrueckii subsp. bulgaricus (strain ATCC BAA-365)	877
2144	Q04EQ9	SYA OENOB	Bacteria	alaS OEOE_1167	Oenococcus oeni (strain BAA-331 / PSU-1)	885
2145	Q04JW5	SYA STRP2	Bacteria	alaS SPD_1216	Streptococcus pneumoniae serotype 2 (strain D39 / NCTC 7466)	872
2146	Q057H8	SYA BUCCC	Bacteria	alaS Bcc_254	Buchnera aphidicola subsp. Cinara cedri	881
2147	Q05VD2	Q05VD2_9SYNE	Bacteria	RS9916_36647	Synechococcus sp. RS9916	892
2148	Q061R8	Q061R8_9SYNE	Bacteria	BL107_07374	Synechococcus sp. BL107	887
2149	Q085Z9	SYA SHEFN	Bacteria	alaS Sfri_1063	Shewanella frigidimarina (strain NCIMB 400)	874
2150	Q0A8K7	SYA ALHEH	Bacteria	alaS Mlg_1481	Alkalilimnicola ehrlichei (strain MLHE-1)	869
2151	Q0AHX2	SYA NITEC	Bacteria	alaS Neut_0791	Nitrosomonas eutropha (strain C91)	863
2152	Q0AQY6	SYA MARMM	Bacteria	alaS Mmar10_1008	Maricaulis maris (strain MCS10)	884
2153	Q0AZQ1	SYA SYNWW	Bacteria	alaS Swol_0468	Syntrophomonas wolfei subsp. wolfei (strain Goettingen)	880
2154	Q0BG79	SYA BURCM	Bacteria	alaS Bamb_1286	Burkholderia ambifaria (strain ATCC BAA-244 / AMMD) (Burkholder)	874
2155	Q0BLS9	SYA FRATO	Bacteria	alaS FTH_1079	Francisella tularensis subsp. holarctica (strain OSU18)	865
2156	Q0BSD5	SYA GRABC	Bacteria	alaS GbCGDNIH1_1370	Granulibacter bethesdensis (strain ATCC BAA-1260 / CGDNIH1)	880
2157	Q0BMY3	SYA HYPNA	Bacteria	alaS HNE_2741	Hyphomonas neptunium (strain ATCC 15444)	881
2158	Q0F3T8	Q0F3T8_9PROT	Bacteria	SPV1_03513	Mariprofundus ferrooxydans PV-1	871
2159	Q0FAQ6	Q0FAQ6_9RHOB	Bacteria	OM2255_03197	Rhodobacterales bacterium HTCC2255	885
2160	Q0FH21	Q0FH21_9RHOB	Bacteria	R2601_23348	Pelagibaca bermudensis HTCC2601	891
2161	Q0FZ12	Q0FZ12_9RHIZ	Bacteria	FP2506_03680	Fulvimarina pelagi HTCC2506	912
2162	Q0HL60	SYA SHESM	Bacteria	alaS Shewmr4_1127	Shewanella sp. (strain MR-4)	874
2163	Q0HXF8	SYA SHESR	Bacteria	alaS Shewmr7_1198	Shewanella sp. (strain MR-7)	874
2164	Q0I426	SYA HAES1	Bacteria	alaS HS_1120	Haemophilus somnus (strain 129Pt) (Histophilus somni (strain 129P	874
2165	Q0I6G6	SYA SYN53	Bacteria	alaS sync_2768	Synechococcus sp. (strain CC9311)	893
2166	Q0K823	SYA CUPNH	Bacteria	alaS H16_A2769	Cupriavidus necator (strain ATCC 17699 / H16 / DSM 428 / Stanier)	874
2167	Q0RF65	SYA FRAAA	Bacteria	alaS FRAAL5252	Frankia alni (strain ACN14a)	881
2168	Q0SON7	SYA RHOSR	Bacteria	alaS RHA1_ro07135	Rhodococcus sp. (strain RHA1)	890
2169	Q0SNU2	SYA BORAP	Bacteria	alaS BAPKO_0228	Borrelia afzelii (strain PKo)	594
2170	Q0SS42	SYA CLOPS	Bacteria	alaS CPR_1750	Clostridium perfringens (strain SM101 / Type A)	879
2171	Q0T1C3	SYA SHIF8	Bacteria	alaS SFV_2808	Shigella flexneri serotype 5b (strain 8401)	876
2172	Q0TEI3	SYA ECOL5	Bacteria	alaS ECP_2657	Escherichia coli O6:K15:H31 (strain 536 / UPEC)	876
2173	Q0TPH4	SYA CLOP1	Bacteria	alaS CPF_2033	Clostridium perfringens (strain ATCC 13124 / NCTC 8237 / Type A)	879
2174	Q0VNK2	SYA ALCBS	Bacteria	alaS ABO_1798	Alcanivorax borkumensis (strain SK2 / ATCC 700651 / DSM 11573)	863
2175	Q0YSB8	Q0YSB8_9CHLB	Bacteria	CferDRAFT_1278	Chlorobium ferrooxidans DSM 13031	901
2176	Q10VG8	SYA TRIEI	Bacteria	alaS Tery_4806	Trichodesmium erythraeum (strain IMS101)	874
2177	Q11IW3	SYA MESSB	Bacteria	alaS Meso_1266	Mesorhizobium sp. (strain BNC1)	887
2178	Q11V49	SYA CYTH3	Bacteria	alaS CHU_1446	Cytophaga hutchinsonii (strain ATCC 33406 / NCIMB 9469)	877
2179	Q129G8	SYA POLSJ	Bacteria	alaS Bpro_2910	Polaromonas sp. (strain JS666 / ATCC BAA-500)	878
2180	Q12PX7	SYA SHEDO	Bacteria	alaS Sden_1213	Shewanella denitrificans (strain OS217 / ATCC BAA-1090 / DSM 15)	874
2181	Q13AB9	SYA RHOPS	Bacteria	alaS RPD_1734	Rhodopseudomonas palustris (strain BisB5)	891
2182	Q13W97	SYA BURXL	Bacteria	alaS Bxeno_A3104_Bxe_A1	Burkholderia xenovorans (strain LB400)	874
2183	Q14HB9	SYA FRAT1	Bacteria	alaS FTF1096c	Francisella tularensis subsp. tularensis (strain FSC 198)	865
2184	Q15RG5	SYA PSEA6	Bacteria	alaS Patl_3015	Pseudoalteromonas atlantica (strain T6c / BAA-1087)	865
2185	Q165U5	SYA ROSDO	Bacteria	alaS RD1_2709	Roseobacter denitrificans (strain ATCC 33942 / OCh 114) (Erythro)	885
2186	Q18BE7	SYA CLOD6	Bacteria	alaS CD1282	Clostridium difficile (strain 630)	879
2187	Q1AWA6	SYA RUBXD	Bacteria	alaS Rxy1_1359	Rubrobacter xylanophilus (strain DSM 9941 / NBRC 16129)	882
2188	Q1B9I0	SYA MYCSS	Bacteria	alaS Mmcs_2346	Mycobacterium sp. (strain MCS)	897
2189	Q1BX19	SYA BURCA	Bacteria	alaS Bcen_0927	Burkholderia cenocepacia (strain AU 1054)	874

2190	Q1C420	SYA YERPA	Bacteria	alaS YPA_2840	Yersinia pestis bv. Antiqua (strain Antiqua)	738
2191	Q1CLK9	SYA YERNP	Bacteria	alaS YPN_0789 YP516_084	Yersinia pestis bv. Antiqua (strain Nepal516)	875
2192	Q1G947	SYA LACDA	Bacteria	alaS Ldb1607	Lactobacillus delbrueckii subsp. bulgaricus (strain ATCC 11842 / DS	877
2193	Q1GHA1	SYA SILST	Bacteria	alaS TM1040_1232	Silicibacter sp. (strain TM1040)	883
2194	Q1GSD9	SYA SPHAL	Bacteria	alaS Sala_1720	Sphingopyxis alaskensis (Sphingomonas alaskensis)	884
2195	Q1H3U9	SYA METFK	Bacteria	alaS Mfla_0568	Methylobacillus flagellatus (strain KT / ATCC 51484 / DSM 6875)	874
2196	Q1I6Z8	SYA PSEE4	Bacteria	alaS PSEEN3875	Pseudomonas entomophila (strain L48)	874
2197	Q1IJG7	SYA ACIBL	Bacteria	alaS Acid345_3983	Acidobacteria bacterium (strain Ellin345)	1098
2198	Q1IW89	SYA DEIGD	Bacteria	alaS Dgeo_2201	Deinococcus geothermalis (strain DSM 11300)	885
2199	Q1J5Z4	SYA STRPF	Bacteria	alaS MGAS10750_Spy1239	Streptococcus pyogenes serotype M4 (strain MGAS10750)	872
2200	Q1JB08	SYA STRPB	Bacteria	alaS MGAS2096_Spy1198	Streptococcus pyogenes serotype M12 (strain MGAS2096)	872
2201	Q1JG77	SYA STRPD	Bacteria	alaS MGAS10270_Spy1202	Streptococcus pyogenes serotype M2 (strain MGAS10270)	872
2202	Q1JL53	SYA STRPC	Bacteria	alaS MGAS9429_Spy1179	Streptococcus pyogenes serotype M12 (strain MGAS9429)	872
2203	Q1K3C1	Q1K3C1_DESAC	Bacteria	Dace_2919	Desulfuromonas acetoxidans DSM 684	880
2204	Q1LQ59	SYA RALME	Bacteria	alaS Rmet_0831	Ralstonia metallidurans (strain CH34 / ATCC 43123 / DSM 2839)	874
2205	Q1MFX9	SYA RHLI3	Bacteria	alaS RL2636	Rhizobium leguminosarum bv. viciae (strain 3841)	884
2206	Q1MP42	SYA LAWIP	Bacteria	alaS LI1181	Lawsonia intracellularis (strain PHE/MN1-00)	884
2207	Q1MXH1	Q1MXH1_9GAMM	Bacteria	RED65_02559	Bermanella marisrubri	448
2208	Q1N815	Q1N815_9SPHN	Bacteria	SKA58_11518	Sphingomonas sp. SKA58	884
2209	Q1NYA7	Q1NYA7_9DELT	Bacteria	MidDRAFT_1604	Delta proteobacterium MLMS-1	925
2210	Q1PYI8	Q1PYI8_9BACT	Bacteria	alaS kustd1393	Candidatus Kuenenia stuttgartiensis	885
2211	Q1QA88	SYA PSYCK	Bacteria	alaS Pcryo_1638	Psychrobacter cryohalolentis (strain K5)	890
2212	Q1QMV7	SYA NITXH	Bacteria	alaS Nham_1621	Nitrobacter hamburgensis (strain X14 / DSM 10229)	891
2213	Q1QZX1	SYA CHRSD	Bacteria	alaS Csal_0625	Chromohalobacter salexigens (strain DSM 3043 / ATCC BAA-138 / I	868
2214	Q1R804	SYA ECOUT	Bacteria	alaS UT189_C3058	Escherichia coli (strain UT189 / UPEC)	876
2215	Q1V253	Q1V253_PELUB	Bacteria	PU1002_03121	Candidatus Pelagibacter ubique HTCC1002	889
2216	Q1V5N2	Q1V5N2_VIBAL	Bacteria	V12G01_13694	Vibrio alginolyticus 12G01	860
2217	Q1VT56	Q1VT56_9FLAO	Bacteria	P700755_04198	Psychroflexus torquis ATCC 700755	872
2218	Q1WT32	SYA LACS1	Bacteria	alaS LSL_1111	Lactobacillus salivarius subsp. salivarius (strain UCC118)	880
2219	Q1YEB6	Q1YEB6_MOBAS	Bacteria	SI859A1_01159	Manganese-oxidizing bacterium (strain SI85-9A1)	890
2220	Q1YR94	Q1YR94_9GAMM	Bacteria	alaS GB2207_03719	Gamma proteobacterium HTCC2207	864
2221	Q1Z483	Q1Z483_PHOPR	Bacteria	P3TCK_25026	Photobacterium profundum 3TCK	873
2222	Q1ZDH3	Q1ZDH3_9GAMM	Bacteria	PCNPT3_13543	Psychromonas sp. CNPT3	869
2223	Q1ZN92	Q1ZN92_PHOAS	Bacteria	VAS14_20506	Photobacterium angustum (strain S14 / CCUG 15956) (Vibrio sp. (s	874
2224	Q218Q3	SYA RHOPB	Bacteria	alaS RPC_1571	Rhodospseudomonas palustris (strain BisB18)	890
2225	Q21L68	SYA SACD2	Bacteria	alaS Sde_1299	Saccharophagus degradans (strain 2-40 / ATCC 43961 / DSM 1702	875
2226	Q221G2	SYA RHOFD	Bacteria	alaS Rfer_0590	Rhodoferrax ferrireducens (strain DSM 15236 / ATCC BAA-621 / T11	876
2227	Q255X6	SYA CHLFF	Bacteria	alaS CF0140	Chlamydomonas reinhardtii (strain Fe/C-56)	875
2228	Q26FE2	Q26FE2_FLABB	Bacteria	BBFL7_02304	Flavobacteria bacterium (strain BBFL7)	873
2229	Q28QV8	SYA JANSC	Bacteria	alaS Jann_1987	Jannaschia sp. (strain CCS1)	884
2230	Q2A3A9	SYA FRATH	Bacteria	alaS FTL_1106	Francisella tularensis subsp. holarctica (strain LVS)	865
2231	Q2B0V3	Q2B0V3_9BACI	Bacteria	B14911_01705	Bacillus sp. NRRL B-14911	877
2232	Q2BQV5	Q2BQV5_9GAMM	Bacteria	alaS MED92_08126	Neptuniibacter caesariensis	854
2233	Q2C125	Q2C125_9GAMM	Bacteria	SKA34_21745	Photobacterium sp. SKA34	874
2234	Q2C9X5	Q2C9X5_9RHOB	Bacteria	OG2516_04593	Oceanicola granulosus HTCC2516	885
2235	Q2FGA8	SYA STAA3	Bacteria	alaS SAUSA300_1575	Staphylococcus aureus (strain USA300)	876
2236	Q2FXV9	SYA STAA8	Bacteria	alaS SAOUHSC_01722	Staphylococcus aureus (strain NCTC 8325)	876
2237	Q2G8V0	SYA NOVAD	Bacteria	alaS Saro_1279	Novosphingobium aromaticivorans (strain DSM 12444)	881
2238	Q2GEP2	SYA NEOSM	Bacteria	alaS NSE_0156	Neorickettsia sennetsu (strain Miyayama)	848
2239	Q2GFL5	SYA EHRCR	Bacteria	alaS ECH_0981	Ehrlichia chaffeensis (strain Arkansas)	887
2240	Q2GJ36	SYA ANAPZ	Bacteria	alaS APH_1059	Anaplasma phagocytophilum (strain HZ)	876
2241	Q2IG40	SYA ANADE	Bacteria	alaS Adeh_3784	Anaeromyxobacter dehalogenans (strain 2CP-C)	905
2242	Q2ITM9	SYA RHOP2	Bacteria	alaS RPB_3737	Rhodospseudomonas palustris (strain HaA2)	891
2243	Q2J821	SYA FRASC	Bacteria	alaS Francci3_3214	Frankia sp. (strain Cc13)	881
2244	Q2JLC4	SYA SYNJB	Bacteria	alaS CYB_1521	Synechococcus sp. (strain JA-2-3B'a(2-13)) (Cyanobacteria bacteri	884
2245	Q2JTG8	SYA SYNJA	Bacteria	alaS CYA_1881	Synechococcus sp. (strain JA-3-3Ab) (Cyanobacteria bacterium Yell	883
2246	Q2K7T4	SYA RHIEC	Bacteria	alaS RHE_CH02322	Rhizobium etli (strain CFN 42 / ATCC 51251)	884
2247	Q2KY72	SYA BORA1	Bacteria	alaS BAV2356	Bordetella avium (strain 197N)	873
2248	Q2LPL7	SYA SYNAS	Bacteria	alaS SYNAS_03400 SYN_0	Syntrophus aciditrophicus (strain SB)	878
2249	Q2NJ60	SYA AYWBP	Bacteria	alaS AYWB_416	Aster yellows witches'-broom phytoplasma (strain AYWB)	864
2250	Q2NVL2	SYA SODGM	Bacteria	alaS SG0538	Sodalis glossinidius (strain morsitans)	875
2251	Q2P1N1	SYA XANOM	Bacteria	alaS XOO2791	Xanthomonas oryzae pv. oryzae (strain MAFF 311018)	882
2252	Q2PY21	Q2PY21_9BACT	Bacteria		Uncultured marine bacterium Ant39E11	868
2253	Q2RHZ3	SYA MOOTA	Bacteria	alaS Moth_1644	Moorella thermoacetica (strain ATCC 39073)	881
2254	Q2RQI0	SYA RHORT	Bacteria	alaS Rru_A2818	Rhodospirillum rubrum (strain ATCC 11170 / NCIB 8255)	883
2255	Q2S2B6	SYA SALRD	Bacteria	alaS SRU_1544	Salinibacter ruber (strain DSM 13855 / M31)	966
2256	Q2S8T9	SYA HAHCH	Bacteria	alaS HCH_05209	Hahella chejuensis (strain KCTC 2396)	876
2257	Q2SSW4	SYA MYCCT	Bacteria	alaS MCAP_0159	Mycoplasma capricolum subsp. capricolum (strain California kid / A	896
2258	Q2SV73	SYA BURTA	Bacteria	alaS BTH_I2661	Burkholderia thailandensis (strain E264 / ATCC 700388 / DSM 1327	874
2259	Q2W1D9	SYA MAGSA	Bacteria	alaS amb3532	Magnetospirillum magneticum (strain AMB-1 / ATCC 700264)	878
2260	Q2YD40	SYA NITMU	Bacteria	alaS Nmul_A0022	Nitrosospora multiformis (strain ATCC 25196 / NCIMB 11849)	862
2261	Q2YRU8	SYA BRUA2	Bacteria	alaS BAB1_1223	Brucella abortus (strain 2308)	885
2262	Q2YT60	SYA STAAB	Bacteria	alaS SAB1489c	Staphylococcus aureus (strain bovine RF122 / ET3-1)	876
2263	Q30PA9	SYA SULDN	Bacteria	alaS Suden_1898	Sulfurimonas denitrificans (strain ATCC 33889 / DSM 1251) (Thiom	849
2264	Q30YS5	SYA DESDG	Bacteria	alaS Dde_2374	Desulfovibrio desulfuricans (strain G20)	880
2265	Q31DD9	SYA PROM9	Bacteria	alaS PMT9312_0045	Prochlorococcus marinus (strain MIT 9312)	886
2266	Q31F91	SYA THICR	Bacteria	alaS Tcr_1590	Thiomicrospira crunogena (strain XCL-2)	864



2267	Q31PW3	SYA SYNE7	Bacteria	alaS Synpcc7942_0876	Synechococcus elongatus (strain PCC 7942) (Anacystis nidulans R2)	876
2268	Q31X62	SYA SHIBS	Bacteria	alaS SBO_2821	Shigella boydii serotype 4 (strain Sb227)	876
2269	Q32CN1	SYA SHIDS	Bacteria	alaS SDY_2893	Shigella dysenteriae serotype 1 (strain Sd197)	876
2270	Q38YN9	SYA LACSS	Bacteria	alaS LCA_0387	Lactobacillus sakei subsp. sakei (strain 23K)	878
2271	Q39HB7	SYA BURS3	Bacteria	alaS Bcep18194_A4553	Burkholderia sp. (strain 383) (Burkholderia cepacia (strain ATCC 17)	874
2272	Q39Z77	SYA GEOMG	Bacteria	alaS Gmet_0201	Geobacter metallireducens (strain GS-15 / ATCC 53774 / DSM 7210)	876
2273	Q3A1W0	SYA PELCD	Bacteria	alaS Pcar_2408	Pelobacter carbinolicus (strain DSM 2380 / Gra Bd 1)	882
2274	Q3AEN8	SYA CARHZ	Bacteria	alaS CHY_0538	Carboxydotherrmus hydrogenoformans (strain Z-2901 / DSM 6008)	874
2275	Q3AGN4	SYA SYNCS	Bacteria	alaS Syncc9605_2518	Synechococcus sp. (strain CC9605)	889
2276	Q3ATN3	SYA CHLCH	Bacteria	alaS Cag_0369	Chlorobium chlorochromatii (strain CaD3)	886
2277	Q3AVV3	SYA SYN59	Bacteria	alaS Syncc9902_2173	Synechococcus sp. (strain CC9902)	890
2278	Q3B1I7	SYA PELLD	Bacteria	alaS Plut_1952	Pelodictyon luteolum (strain DSM 273) (Chlorobium luteolum (strain	887
2279	Q3BUQ7	SYA XANC5	Bacteria	alaS XCV1775	Xanthomonas campestris pv. vesicatoria (strain 85-10)	882
2280	Q3D2Y9	Q3D2Y9_STRAG	Bacteria	alaS SAI_0890	Streptococcus agalactiae H36B	658
2281	Q3D855	Q3D855_STRAG	Bacteria	alaS SAN_0911	Streptococcus agalactiae COH1	872
2282	Q3D6W6	Q3D6W6_STRAG	Bacteria	alaS SAM_0837	Streptococcus agalactiae CJB111	872
2283	Q3DNA0	Q3DNA0_STRAG	Bacteria	alaS SAL_0865	Streptococcus agalactiae 515	872
2284	Q3DQX5	Q3DQX5_STRAG	Bacteria	alaS SAJ_0861	Streptococcus agalactiae 18RS21	872
2285	Q3ILF3	SYA PSEHT	Bacteria	alaS PSHAa0532	Pseudoalteromonas haloplanktis (strain TAC 125)	868
2286	Q3J0R1	SYA RHOS4	Bacteria	alaS RHOS4_20550_RSP_0	Rhodobacter sphaeroides (strain ATCC 17023 / 2.4.1 / NCIB 8253 /	883
2287	Q3JCK8	SYA NITOC	Bacteria	alaS Noc_0926	Nitrosococcus oceani (strain ATCC 19707 / NCIMB 11848)	873
2288	Q3JT87	SYA BURP1	Bacteria	alaS BURPS1710b_1815	Burkholderia pseudomallei (strain 1710b)	874
2289	Q3K1P7	SYA STRA1	Bacteria	alaS SAK_0934	Streptococcus agalactiae serotype Ia	872
2290	Q3K892	SYA PSEPF	Bacteria	alaS Pfl01_4275	Pseudomonas fluorescens (strain Pf0-1)	874
2291	Q3KKU4	SYA CHLTA	Bacteria	alaS CTA_0815	Chlamydia trachomatis serovar A (strain HAR-13 / ATCC VR-571B)	875
2292	Q3MGN4	SYA ANAVT	Bacteria	alaS Ava_0226	Anabaena variabilis (strain ATCC 29413 / PCC 7937)	880
2293	Q3R741	Q3R741_XYLFA	Bacteria	XfasoDRAFT_2887	Xylella fastidiosa subsp. sandyi Ann-1	884
2294	Q3RE84	Q3RE84_XYLFA	Bacteria	XfasaDRAFT_0566	Xylella fastidiosa Dixon	884
2295	Q3SLA9	SYA THIDA	Bacteria	alaS Tbd_0553	Thiobacillus denitrificans (strain ATCC 25259)	872
2296	Q3ST43	SYA NITWN	Bacteria	alaS Nwi_1287	Nitrobacter winogradskyi (strain Nb-255 / ATCC 25391)	891
2297	Q3YSV8	SYA EHRJ	Bacteria	alaS Ecaj_0146	Ehrlichia canis (strain Jake)	887
2298	Q3YGG6	SYA SHISS	Bacteria	alaS SSON_2841	Shigella sonnei (strain Ss046)	876
2299	Q40JC2	Q40JC2_EHRCH	Bacteria	EchaDRAFT_0330	Ehrlichia chaffeensis str. Sapulpa	887
2300	Q46I13	SYA PROMT	Bacteria	alaS PMN2A_1377	Prochlorococcus marinus (strain NATL2A)	886
2301	Q474F4	SYA CUPPJ	Bacteria	alaS Reut_A0850	Cupriavidus pinatubonensis (strain JMP134 / LMG 1197) (Alcaligenes	874
2302	Q47AU8	SYA DECAR	Bacteria	alaS Daro_3303	Dechloromonas aromatica (strain RCB)	871
2303	Q47N66	SYA THEFY	Bacteria	alaS Tfu_2070	Thermobifida fusca (strain YX)	889
2304	Q487H5	SYA COLP3	Bacteria	alaS CPS_1042	Colwellia psychrerythraea (strain 34H / ATCC BAA-681) (Vibrio psych	876
2305	Q48G25	SYA PSE14	Bacteria	alaS PSPPH_3512	Pseudomonas syringae pv. phaseolicola (strain 1448A / Race 6)	874
2306	Q48SS4	SYA STRPM	Bacteria	alaS M28_Spy1126	Streptococcus pyogenes serotype M28	872
2307	Q493M6	SYA BLOPB	Bacteria	alaS BPEN_174	Blochmannia pennsylvanicus (strain BPEN)	879
2308	Q49Y56	SYA STAS1	Bacteria	alaS SSP1143	Staphylococcus saprophyticus subsp. saprophyticus (strain ATCC 15	876
2309	Q4A633	SYA MYCS5	Bacteria	alaS MS53_0376	Mycoplasma synoviae (strain 53)	878
2310	Q4A8G4	SYA MYCH7	Bacteria	alaS MHP7448_0201	Mycoplasma hyopneumoniae (strain 7448)	883
2311	Q4AAD3	SYA MYCHJ	Bacteria	alaS MHJ_0197	Mycoplasma hyopneumoniae (strain J / ATCC 25934 / NCTC 10110)	883
2312	Q4BVF9	Q4BVF9_CROWT	Bacteria	CwatDRAFT_0388	Crocospaera watsonii WH 8501	615
2313	Q4E8A4	Q4E8A4_9RICK	Bacteria	alaS WwSim0411	Wolbachia endosymbiont of Drosophila simulans	845
2314	Q4ECR2	Q4ECR2_9RICK	Bacteria	alaS WwAna1494	Wolbachia endosymbiont of Drosophila ananassae	880
2315	Q4EGQ9	Q4EGQ9_LISMO	Bacteria	alaS LMOh7858_1603	Listeria monocytogenes serotype 4b str. H7858	879
2316	Q4ENU6	Q4ENU6_LISMO	Bacteria	alaS LMOF6854_1550	Listeria monocytogenes serotype 1/2a str. F6854	879
2317	Q4FMX6	SYA PELUB	Bacteria	alaS SAR11_0643	Pelagibacter ubique	889
2318	Q4FRQ0	SYA PSYA2	Bacteria	alaS Psyc_1460	Psychrobacter arcticus (strain DSM 17307 / 273-4)	890
2319	Q4JVF5	SYA CORJK	Bacteria	alaS jk1038	Corynebacterium jeikeium (strain K411)	887
2320	Q4K843	SYA PSEF5	Bacteria	alaS PFL_4506	Pseudomonas fluorescens (strain Pf-5 / ATCC BAA-477)	874
2321	Q4L6W5	SYA STAHL	Bacteria	alaS SH1301	Staphylococcus haemolyticus (strain JCSC1435)	876
2322	Q4MRZ1	Q4MRZ1_BACCE	Bacteria	alaS BCE_G9241_4442	Bacillus cereus G9241	880
2323	Q4QM86	SYA HAEI8	Bacteria	alaS NTHI0978	Haemophilus influenzae (strain 86-028NP)	874
2324	Q4UJT5	SYA RICFE	Bacteria	alaS RF_1353	Rickettsia felis (Rickettsia azadi)	878
2325	Q4UTR6	SYA XANC8	Bacteria	alaS XC_2507	Xanthomonas campestris pv. campestris (strain 8004)	882
2326	Q4ZQI4	SYA PSEU2	Bacteria	alaS Psyr_3556	Pseudomonas syringae pv. syringae (strain B728a)	874
2327	Q56273	SYA THIFE	Bacteria	alaS	Thiobacillus ferrooxidans (Acidithiobacillus ferrooxidans)	877
2328	Q56648	SYA VIBCH	Bacteria	alaS VC_0545	Vibrio cholerae	860
2329	Q57CU0	SYA BRUAB	Bacteria	alaS BruAb1_1206	Bruceella abortus	885
2330	Q57KU6	SYA SALCH	Bacteria	alaS SCH_2760	Salmonella choleraesuis	876
2331	Q5E7G5	SYA VIBF1	Bacteria	alaS VF_0536	Vibrio fischeri (strain ATCC 700601 / ES114)	859
2332	Q5F7C4	SYA NIEG1	Bacteria	alaS NGO1254	Neisseria gonorrhoeae (strain ATCC 700825 / FA 1090)	874
2333	Q5FH56	SYA EHRRG	Bacteria	alaS ERGA_CDS_01420	Ehrlichia ruminantium (strain Gardel)	887
2334	Q5FLW6	SYA LACAC	Bacteria	alaS LBA0417	Lactobacillus acidophilus	879
2335	Q5GSS5	SYA WOLTR	Bacteria	alaS Wbm0361	Wolbachia sp. subsp. Brugia malayi (strain TRS)	875
2336	Q5GYM8	SYA XANOR	Bacteria	alaS XOO2939	Xanthomonas oryzae pv. oryzae	882
2337	Q5HC27	SYA EHRRW	Bacteria	alaS Erum1500_ERWE_CDS	Ehrlichia ruminantium (strain Welgevonden)	887
2338	Q5HFE4	SYA STAAC	Bacteria	alaS SACOL1673	Staphylococcus aureus (strain COL)	876
2339	Q5HNT2	SYA STAFQ	Bacteria	alaS SERP1182	Staphylococcus epidermidis (strain ATCC 35984 / RP62A)	876
2340	Q5KWU5	SYA GEOKA	Bacteria	alaS GK2556	Geobacillus kaustophilus	887
2341	Q5L512	SYA CHLAB	Bacteria	alaS CAB842	Chlamydia abortus	875
2342	Q5LHE6	SYA BACFN	Bacteria	alaS BF0689	Bacteroides fragilis (strain ATCC 25285 / NCTC 9343)	872
2343	Q5LRU1	SYA SILPO	Bacteria	alaS SPO2033	Silicibacter pomeroyi	890



2344	Q5M126	SYA STRT1	Bacteria	alaS str0457	Streptococcus thermophilus (strain CNRZ 1066)	872
2345	Q5M5L5	SYA STRT2	Bacteria	alaS stu0457	Streptococcus thermophilus (strain ATCC BAA-250 / LMG 18311)	872
2346	Q5N4B5	SYA SYNPG	Bacteria	alaS syc0664_c	Synechococcus sp. (strain ATCC 27144 / PCC 6301 / SAUG 1402/1)	876
2347	Q5NFW7	SYA FRATT	Bacteria	alaS FTT_1096c	Francisella tularensis subsp. tularensis	865
2348	Q5P7Q3	SYA AROAE	Bacteria	alaS AZOSEA05360 ebA102	Aromatoleum aromaticum (strain EbN1) (Azoarcus sp. (strain EbN1)	873
2349	Q5PBJ0	SYA ANAMM	Bacteria	alaS AM224	Anaplasma marginale (strain St. Maries)	882
2350	Q5PF17	SYA SALPA	Bacteria	alaS SPA2685	Salmonella paratyphi A	876
2351	Q5QUV7	SYA IDILO	Bacteria	alaS IL1738	Idiomarina loihiensis	865
2352	Q5WHM8	SYA BACSK	Bacteria	alaS ABC1592	Bacillus clausii (strain KSM-K16)	876
2353	Q5WVQ2	SYA LEGPL	Bacteria	alaS lpl1763	Legionella pneumophila (strain Lens)	860
2354	Q5X4B7	SYA LEGPA	Bacteria	alaS lpp1763	Legionella pneumophila (strain Paris)	860
2355	Q5XBH1	SYA STRP6	Bacteria	alaS M6_Spy1107	Streptococcus pyogenes serotype M6	872
2356	Q5YTJ9	SYA NOCFA	Bacteria	alaS NFA_36440	Nocardia farcinica	888
2357	Q5ZUJ9	SYA LEGPH	Bacteria	alaS lpg1799	Legionella pneumophila subsp. pneumophila (strain Philadelphia 1 /	860
2358	Q601M2	SYA MYCH2	Bacteria	alaS mhp180	Mycoplasma hypopneumoniae (strain 232)	883
2359	Q60BS6	SYA METCA	Bacteria	alaS MCA0389	Methylococcus capsulatus	867
2360	Q62KZ3	SYA BURMA	Bacteria	alaS BMA0895	Burkholderia mallei (Pseudomonas mallei)	874
2361	Q634F6	SYA BACCZ	Bacteria	alaS BCE33L4132	Bacillus cereus (strain ZK / E33L)	880
2362	Q63TF9	SYA BURPS	Bacteria	alaS BPSL2009	Burkholderia pseudomallei (Pseudomonas pseudomallei)	874
2363	Q64YB4	SYA BACFR	Bacteria	alaS BF0761	Bacteroides fragilis	872
2364	Q65GS5	SYA BACL D	Bacteria	alaS BLI02869 BL02033	Bacillus licheniformis (strain DSM 13 / ATCC 14580)	878
2365	Q65VQ5	SYA MANSM	Bacteria	alaS MS0348	Mannheimia succiniciproducens (strain MBEL55E)	875
2366	Q662E4	SYA BORGA	Bacteria	alaS BG0223	Borrelia garinii	594
2367	Q66E68	SYA YERPS	Bacteria	alaS YPTB0825	Yersinia pseudotuberculosis	875
2368	Q67MV8	SYA SYMTH	Bacteria	alaS STH2000	Symbiobacterium thermophilum	872
2369	Q68VQ7	SYA RICTY	Bacteria	alaS RT0845	Rickettsia typhi	877
2370	Q6A8I8	SYA PROAC	Bacteria	alaS PPA1178	Propionibacterium acnes	892
2371	Q6AFA1	SYA LEIXX	Bacteria	alaS Lxx10910	Leifsonia xyli subsp. xyli	885
2372	Q6AQ16	SYA DESPS	Bacteria	alaS DP0828	Desulfotalea psychrophila	882
2373	Q6D1T0	SYA ERWCT	Bacteria	alaS ECA3367	Erwinia carotovora subsp. atroseptica (Pectobacterium atrosepticum	875
2374	Q6F0K3	SYA MESFL	Bacteria	alaS Mfl613	Mesoplasma florum (Acholeplasma florum)	892
2375	Q6FCT2	SYA ACIAD	Bacteria	alaS ACIAD1253	Acinetobacter sp. (strain ADP1)	878
2376	Q6FZF1	SYA BARQU	Bacteria	alaS BQ07940	Bartonella quintana (Rochalimaea quintana)	888
2377	Q6G2Z4	SYA BARHE	Bacteria	alaS BH10220	Bartonella henselae (Rochalimaea henselae)	887
2378	Q6G8V1	SYA STAAS	Bacteria	alaS SAS1554	Staphylococcus aureus (strain MSSA476)	876
2379	Q6GG85	SYA STAAR	Bacteria	alaS SAR1697	Staphylococcus aureus (strain MRSA252)	876
2380	Q6HDD7	SYA BACHK	Bacteria	alaS BT9727_4121	Bacillus thuringiensis subsp. konkukian	880
2381	Q6LMU3	SYA PHOPR	Bacteria	alaS PBPR3067	Photobacterium profundum (Photobacterium sp. (strain S59))	873
2382	Q6MB06	SYA PARUW	Bacteria	alaS pc1519	Protochlamydia amoebophila (strain UWE25)	878
2383	Q6YQR8	SYA ONYPE	Bacteria	alaS PAM_305	Onion yellows phytoplasma	864
2384	Q71ZG6	SYA LISMF	Bacteria	alaS LMOF2365_1523	Listeria monocytogenes serotype 4b (strain F2365)	879
2385	Q7MHR6	SYA VIBVY	Bacteria	alaS VV2803	Vibrio vulnificus (strain YJ016)	860
2386	Q7MV54	SYA PORGI	Bacteria	alaS PG_1246	Porphyromonas gingivalis (Bacteroides gingivalis)	876
2387	Q7N7A5	SYA PHOLL	Bacteria	alaS plu1250	Photorhabdus luminescens subsp. laumondii	876
2388	Q7NI36	SYA GLOVI	Bacteria	alaS gli2348	Gloeobacter violaceus	871
2389	Q7NXM2	SYA CHRVO	Bacteria	alaS CV_1604	Chromobacterium violaceum	877
2390	Q7P6H0	Q7P6H0_FUSNV	Bacteria	FNV1359	Fusobacterium nucleatum subsp. vincentii ATCC 49256	867
2391	Q7PA66	Q7PA66_RICSI	Bacteria	rsib_orf.769	Rickettsia sibirica 246	878
2392	Q7TYB1	SYA MYCBO	Bacteria	alaS Mb2585c	Mycobacterium bovis	904
2393	Q7U3R9	SYA SYNXP	Bacteria	alaS SYNW2360	Synechococcus sp. (strain WH8102)	889
2394	Q7UBU3	SYA SHIFL	Bacteria	alaS SF2720_S2911	Shigella flexneri	876
2395	Q7V3N0	SYA PROMP	Bacteria	alaS PMM0044	Prochlorococcus marinus subsp. pastoris (strain CCMP1986 / MED4	886
2396	Q7V419	SYA PROMM	Bacteria	alaS PMT_2157	Prochlorococcus marinus (strain MIT 9313)	892
2397	Q7VEG5	SYA PROMA	Bacteria	alaS Pro_0048	Prochlorococcus marinus	892
2398	Q7VHV4	SYA HELHP	Bacteria	alaS HH_0859	Helicobacter hepaticus	892
2399	Q7VLK0	SYA HAEDU	Bacteria	alaS HD_1429	Haemophilus ducreyi	874
2400	Q7VXE1	SYA BORPE	Bacteria	alaS lovB_BP1836	Bordetella pertussis	874
2401	Q7W6N4	SYA BORPA	Bacteria	alaS lovB_BPP2870	Bordetella parapertussis	874
2402	Q7WHL6	SYA BORBR	Bacteria	alaS lovB_BB3191	Bordetella bronchiseptica (Alcaligenes bronchisepticus)	874
2403	Q817Z0	SYA BACCR	Bacteria	alaS BC_4383	Bacillus cereus (strain ATCC 14579 / DSM 31)	880
2404	Q81LK0	SYA BACAN	Bacteria	alaS BA_4616_GBAA_4616	Bacillus anthracis	880
2405	Q821R2	SYA CHLCV	Bacteria	alaS CCA_00876	Chlamydomonas reinhardtii	875
2406	Q827S4	SYA STRAW	Bacteria	alaS SAV_6850	Streptomyces avermitilis	890
2407	Q82TF8	SYA NITEU	Bacteria	alaS NE1930	Nitrosomonas europaea	863
2408	Q835J8	SYA ENTFA	Bacteria	alaS EF_1379	Enterococcus faecalis (Streptococcus faecalis)	880
2409	Q83CQ6	SYA COXBU	Bacteria	alaS CBU_1052	Coxiella burnetii	865
2410	Q83GD1	SYA TROWT	Bacteria	alaS TWT_376	Tropheryma whipplei (strain Twist) (Whipple's bacillus)	880
2411	Q83HV0	SYA TROW8	Bacteria	alaS TW393	Tropheryma whipplei (strain TW08/27) (Whipple's bacillus)	880
2412	Q878X3	SYA STRP3	Bacteria	alaS SpyM3_1058_SPs0805	Streptococcus pyogenes serotype M3	872
2413	Q87F43	SYA XYLFT	Bacteria	alaS PD_0094	Xylella fastidiosa (strain Temecula1 / ATCC 700964)	884
2414	Q87LR3	SYA VIBPA	Bacteria	alaS VP2548	Vibrio parahaemolyticus	860
2415	Q88E18	SYA PSEPK	Bacteria	alaS PP_4474	Pseudomonas putida (strain KT2440)	874
2416	Q88V10	SYA LACPL	Bacteria	alaS lp_2277	Lactobacillus plantarum	880
2417	Q896F2	SYA CLOTE	Bacteria	alaS CTC_01055	Clostridium tetani	879
2418	Q89I89	SYA BRAJA	Bacteria	alaS bli5750	Bradyrhizobium japonicum	892
2419	Q8A0M6	SYA BACTN	Bacteria	alaS BT_3995	Bacteroides thetaiotaomicron	872
2420	Q8CSA7	SYA STAES	Bacteria	alaS SE_1301	Staphylococcus epidermidis (strain ATCC 12228)	876

2421	Q8CWY0	SYA STRMU	Bacteria	alaS SMU_650	Streptococcus mutans	872
2422	Q8DC49	SYA VIBVU	Bacteria	alaS VV1_1593	Vibrio vulnificus	860
2423	Q8DH56	SYA THEEB	Bacteria	alaS tli2103	Thermosynechococcus elongatus (strain BP-1)	882
2424	Q8DPC7	SYA STRR6	Bacteria	alaS spr1240	Streptococcus pneumoniae (strain ATCC BAA-255 / R6)	872
2425	Q8E0C4	SYA STRA5	Bacteria	alaS SAG0810	Streptococcus agalactiae serotype V	872
2426	Q8E600	SYA STRA3	Bacteria	alaS gbs0829	Streptococcus agalactiae serotype III	872
2427	Q8EBS1	SYA SHEON	Bacteria	alaS SO_3428	Shewanella oneidensis	874
2428	Q8EPS9	SYA OCEIH	Bacteria	alaS OB2009	Oceanobacillus iheyensis	879
2429	Q8FT23	SYA COREF	Bacteria	alaS CE1748	Corynebacterium efficiens	890
2430	Q8G5W9	SYA BIFLO	Bacteria	alaS BL0882	Bifidobacterium longum	893
2431	Q8GDZ1	Q8GDZ1_HELMO	Bacteria		Heliobacillus mobilis	883
2432	Q8K9E7	SYA BUCAP	Bacteria	alaS BUsg_390	Buchnera aphidicola subsp. Schizaphis graminum	883
2433	Q8KG04	SYA CHLTE	Bacteria	alaS CT0166	Chlorobium tepidum	885
2434	Q8NQ22	SYA CORGL	Bacteria	alaS Cgl1632_cg1838	Corynebacterium glutamicum (Brevibacterium flavum)	888
2435	Q8NW87	SYA STAAW	Bacteria	alaS MW1568	Staphylococcus aureus (strain MW2)	876
2436	Q8P0E6	SYA STRP8	Bacteria	alaS spyM18_1399	Streptococcus pyogenes serotype M18	872
2437	Q8P9X0	SYA XANCP	Bacteria	alaS XCC1724	Xanthomonas campestris pv. campestris	882
2438	Q8PLQ0	SYA XANAC	Bacteria	alaS XAC1742	Xanthomonas axonopodis pv. citri (Citrus canker)	882
2439	Q8RAH4	SYA THETN	Bacteria	alaS TTE1248	Thermoanaerobacter tengcongensis	878
2440	Q8RFJ8	SYA FUSNN	Bacteria	alaS FN0697	Fusobacterium nucleatum subsp. nucleatum	867
2441	Q8UE87	SYA AGRT5	Bacteria	alaS Atu1873_AGR_C_3437	Agrobacterium tumefaciens (strain C58 / ATCC 33970)	887
2442	Q8X3W8	SYA ECO57	Bacteria	alaS Z3999_EC53554	Escherichia coli O157:H7	876
2443	Q8XJH6	SYA CLOPE	Bacteria	alaS CPE1780	Clostridium perfringens	879
2444	Q8Y193	SYA RALSO	Bacteria	alaS RSc0797_RS05040	Ralstonia solanacearum (Pseudomonas solanacearum)	884
2445	Q8Y722	SYA LISMO	Bacteria	alaS lmo1504	Listeria monocytogenes	879
2446	Q8YUD4	SYA NOSS1	Bacteria	alaS alr2418	Nostoc sp. (strain PCC 7120 / UTEX 2576)	880
2447	Q8Z4D5	SYA SALT1	Bacteria	alaS STY2948_t2728	Salmonella typhi	876
2448	Q8ZBT8	SYA YERPE	Bacteria	alaS YPO3305_y0883_YP_03	Yersinia pestis	875
2449	Q8ZMK6	SYA SALT2	Bacteria	alaS STM2827	Salmonella typhimurium	876
2450	Q92BK9	SYA LISIN	Bacteria	alaS lin1539	Listeria innocua	879
2451	Q92G00	SYA RICCN	Bacteria	alaS RC1327	Rickettsia conorii	878
2452	Q97IG3	SYA CLOAB	Bacteria	alaS CA_C1678	Clostridium acetobutylicum	881
2453	Q97Q48	SYA STRPN	Bacteria	alaS SP_1383	Streptococcus pneumoniae	872
2454	Q98NQ5	SYA RHILO	Bacteria	alaS mlr0032	Rhizobium loti (Mesorhizobium loti)	888
2455	Q98Q12	SYA MYCPU	Bacteria	alaS MYPU_5570	Mycoplasma pulmonis	873
2456	Q99Z57	SYA STRP1	Bacteria	alaS SPy_1389_M5005_Spy	Streptococcus pyogenes serotype M1	872
2457	Q9A5C1	SYA CAUCR	Bacteria	alaS CC_2529	Caulobacter crescentus (Caulobacter vibrioides)	880
2458	Q9CCT0	SYA MYCLE	Bacteria	alaS ML0512	Mycobacterium leprae	908
2459	Q9CEW0	SYA LACLA	Bacteria	alaS LL1724_L0343	Lactococcus lactis subsp. lactis (Streptococcus lactis)	872
2460	Q9I553	SYA PSEAE	Bacteria	alaS PA0903	Pseudomonas aeruginosa	874
2461	Q9JTG4	SYA NEIMA	Bacteria	alaS NMA1788	Neisseria meningitidis serogroup A	874
2462	Q9JYG6	SYA NEIMB	Bacteria	alaS NMB1595	Neisseria meningitidis serogroup B	874
2463	Q9KDE6	SYA BACHD	Bacteria	alaS BH1267	Bacillus halodurans	879
2464	Q9KXP9	SYA STRCO	Bacteria	alaS SCO1501_SC9C5.25c	Streptomyces coelicolor	890
2465	Q9PH22	SYA XYLFA	Bacteria	alaS XF_0124	Xylella fastidiosa	884
2466	Q9PLH5	SYA CHLMU	Bacteria	alaS TC_0125	Chlamydia muridarum	875
2467	Q9PQC2	SYA UREPA	Bacteria	alaS UU369	Ureaplasma parvum (Ureaplasma urealyticum biotype 1)	906
2468	Q9RNN8	SYA ZYMMO	Bacteria	alaS ZMO0845	Zymomonas mobilis	890
2469	Q9RS27	SYA DEIRA	Bacteria	alaS DR_2300	Deinococcus radiodurans	890
2470	Q9X1B6	SYA THEMA	Bacteria	alaS TM_1396	Thermotoga maritima	863
2471	Q9XDM3	SYA AQUPY	Bacteria	alaS	Aquifex pyrophilus	871
2472	Q9Z714	SYA CHLPN	Bacteria	alaS CPn_0892_CP_0974_C	Chlamydia pneumoniae (Chlamydophila pneumoniae)	872
2473	Q9ZCA4	SYA RICPR	Bacteria	alaS RP856	Rickettsia prowazekii	877
2474	A1A5T1	A1A5T1_DANRE	Eukarya	aars	Danio rerio (Zebrafish) (Brachydanio rerio)	966
2475	A1C3S4	A1C3S4_ASPCL	Eukarya	ACLA_057200	Aspergillus clavatus	961
2476	A2R938	A2R938_ASPNC	Eukarya	An16g09320	Aspergillus niger (strain CBS 513.88 / FGSC A1513)	961
2477	A3LR13	A3LR13_PICST	Eukarya	ALA1_PICST_88206	Pichia stipitis (Yeast)	954
2478	A4QRE3	A4QRE3_MAGO7	Eukarya	MGG_03607	Magnaporthe oryzae (strain 70-15 / FGSC 8958) (Rice blast fungus)	961
2479	A5DAB8	A5DAB8_PICGU	Eukarya	PGUG_00223	Pichia guilliermondii (Yeast) (Candida guilliermondii)	964
2480	A6QLT9	A6QLT9_BOVIN	Eukarya	AARS	Bos taurus (Bovine)	968
2481	A6RM66	A6RM66_BOTFB	Eukarya	BC1G_01538	Botryotinia fuckeliana (strain B05.10) (Noble rot fungus) (Botrytis cinerea)	952
2482	A6ZPG5	A6ZPG5_YEAS7	Eukarya	ALA1_SCY_5380	Saccharomyces cerevisiae (strain YJM789) (Baker's yeast)	958
2483	A7SHU9	A7SHU9_NEMVE	Eukarya	v1g189992	Nematostella vectensis (Starlet sea anemone)	961
2484	A7TPK2	A7TPK2_VANPO	Eukarya	Kpol_1040p7	Vanderwaltozyma polyspora (strain ATCC 22028 / DSM 70294) (Kluyveromyces polysporus)	956
2485	A7TRK4	A7TRK4_VANPO	Eukarya	Kpol_1071p9	Vanderwaltozyma polyspora (strain ATCC 22028 / DSM 70294) (Kluyveromyces polysporus)	957
2486	A8J462	A8J462_CHLRE	Eukarya	CHLREDRAFT_119554	Chlamydomonas reinhardtii (Chlamydomonas smithii)	879
2487	A8N6S6	A8N6S6_COPC7	Eukarya	CC1G_11540	Coprinopsis cinerea (strain Okayama-7 / 130 / FGSC 9003) (Inky cap)	968
2488	A8Q378	A8Q378_BRUMA	Eukarya	Bm1_41830	Brugia malayi (Filarial nematode worm)	962
2489	A8XEI6	A8XEI6_CAEBR	Eukarya	cbr-aars-2_Cbr-aars-2_CBG	Caenorhabditis briggsae AF16	967
2490	A9RG15	A9RG15_PHYPA	Eukarya	PHYPADRAFT_174459	Physcomitrella patens subsp. patens (Moss)	927
2491	A9T4K7	A9T4K7_PHYPA	Eukarya	PHYPADRAFT_140193	Physcomitrella patens subsp. patens (Moss)	937
2492	A9URD2	A9URD2_MONBE	Eukarya	14194	Monosiga brevicollis (Choanoflagellate)	1000
2493	B0D0A1	B0D0A1_LACBS	Eukarya	LACBIDRAFT_183417	Laccaria bicolor (strain S238N-H82) (Bicoloured deceiver) (Laccaria amethystina)	955
2494	B0S708	B0S708_DANRE	Eukarya	DKEY-151P17.1-001	Danio rerio (Zebrafish) (Brachydanio rerio)	988
2495	B0S709	B0S709_DANRE	Eukarya	DKEY-151P17.1-002	Danio rerio (Zebrafish) (Brachydanio rerio)	963
2496	B0WGD2	B0WGD2_CULQU	Eukarya	CpipJ_CPIJ005916	Culex quinquefasciatus (Southern house mosquito) (Culex pungens)	967
2497	B1WBD3	B1WBD3_XENLA	Eukarya	aars LOC100158432	Xenopus laevis (African clawed frog)	968

2498	B1X4D9	B1X4D9 PAUCH	Eukarya	alaS PCC_0367	Paulinella chromatophora	891
2499	B2WCE6	B2WCE6 PYRTR	Eukarya	PTRG_07655	Pyrenophora tritici-repentis (strain Pt-1C-BFP) (Wheat tan spot fun	966
2500	B3LJZ4	B3LJZ4 YEAS1	Eukarya	SCRG_01712	Saccharomyces cerevisiae (strain RM11-1a) (Baker's yeast)	958
2501	B3MP00	B3MP00 DROAN	Eukarya	GF14684 Dana\GF14684 D	Drosophila ananassae (Fruit fly)	966
2502	B3N756	B3N756 DROER	Eukarya	GG23450 Dere\GG23450 D	Drosophila erecta (Fruit fly)	966
2503	B4DR45	B4DR45 HUMAN	Eukarya	AARS	Homo sapiens (Human)	992
2504	B4GJT1	B4GJT1 DROPE	Eukarya	GL25810 Dper\GL25810 D	Drosophila persimilis (Fruit fly)	966
2505	B4HYK1	B4HYK1 DROSE	Eukarya	GM12994 Dsec\GM12994 D	Drosophila sechellia (Fruit fly)	966
2506	B4JEE5	B4JEE5 DROGR	Eukarya	GH11356 Dgri\GH11356 D	Drosophila grimshawi (Fruit fly) (Idiomyia grimshawi)	967
2507	B4KE83	B4KE83 DROMO	Eukarya	GI12987 Dmoj\GI12987 D	Drosophila mojavensis (Fruit fly)	967
2508	B4M8W1	B4M8W1 DROVI	Eukarya	GJ18196 Dvir\GJ18196 D	Drosophila virilis (Fruit fly)	967
2509	B4N0Y7	B4N0Y7 DROWI	Eukarya	GK24844 Dwil\GK24844 D	Drosophila willistoni (Fruit fly)	967
2510	B4NWX7	B4NWX7 DROYA	Eukarya	GE11031 Dyak\GE11031 D	Drosophila yakuba (Fruit fly)	966
2511	B4Q6S2	B4Q6S2 DROSI	Eukarya	GD22412 Dsim\GD22412 D	Drosophila simulans (Fruit fly)	948
2512	B5VSL3	B5VSL3 YEAS6	Eukarya	AWRI1631_154850	Saccharomyces cerevisiae (strain AWRI1631) (Baker's yeast)	958
2513	B5X2C6	B5X2C6 SALS	Eukarya	SYAC	Salmo salar (Atlantic salmon)	967
2514	B6HVA4	B6HVA4 PENCW	Eukarya	Pc22g10240	Penicillium chrysogenum (strain ATCC 28089 / DSM 1075 / Wiscons	958
2515	B6JYX5	B6JYX5 SCHJY	Eukarya	SJAG_01797	Schizosaccharomyces japonicus (strain yFS275 / FY16936) (Fission	961
2516	B6QMI2	B6QMI2 PENMQ	Eukarya	PMAA_060490	Penicillium marneffeii (strain ATCC 18224 / CBS 334.59 / QM 7333)	1000
2517	B7G7J0	B7G7J0 PHATC	Eukarya	PHATRDRAFT_15186	Phaeodactylum tricornutum (strain CCAP 1055/1)	959
2518	B8BFZ6	B8BFZ6 ORYSI	Eukarya	Osi_32912	Oryza sativa subsp. indica (Rice)	953
2519	B8LD66	B8LD66 THAPS	Eukarya	ALATS1 THAPSDRAFT_382	Thalassiosira pseudonana CCMP1335	933
2520	B8MHK7	B8MHK7 TALS	Eukarya	TSTA_011040	Talaromyces stipitatus (strain ATCC 10500 / CBS 375.48 / QM 6759	1002
2521	B9SYR5	B9SYR5 RICCO	Eukarya	RCOM_0036070	Ricinus communis (Castor bean)	1025
2522	B9WJ73	B9WJ73 CANDC	Eukarya	ALA1_CD36_64230	Candida dubliniensis (strain CD36 / CBS 7987 / NCPF 3949 / NRRL	969
2523	C0S7L6	C0S7L6 PARBP	Eukarya	PABG_03816	Paracoccidioides brasiliensis (strain Pb03)	962
2524	C1E0L4	C1E0L4 MICS	Eukarya	MICPUN_79369	Micromonas sp. (strain RCC299 / NOUM17) (Picoplanktonic green a	923
2525	C1FZG2	C1FZG2 PARBD	Eukarya	PADG_00002	Paracoccidioides brasiliensis (strain Pb18)	962
2526	C1GTD2	C1GTD2 PARBA	Eukarya	PAAG_01777	Paracoccidioides brasiliensis (strain ATCC MYA-826 / Pb01)	962
2527	C4Q7I0	C4Q7I0 SCHMA	Eukarya	Smp_038240	Schistosoma mansoni (Blood fluke)	980
2528	C4R4M5	C4R4M5 PICPG	Eukarya	PAS_chr3_0462	Pichia pastoris (strain GS115) (Yeast)	981
2529	C4Y8W6	C4Y8W6 CLAL4	Eukarya	CLUG_04644	Clavospora lusitaniae (strain ATCC 42720) (Yeast) (Candida lusitaniae	964
2530	C4YSD8	C4YSD8 CANAW	Eukarya	CAWG_05001	Candida albicans (strain WO-1) (Yeast)	969
2531	C5DG24	C5DG24 LACTC	Eukarya	KLTH0D01848g	Lachancea thermotolerans (strain CBS 6340) (Yeast) (Kluyveromyc	955
2532	C5DV71	C5DV71 ZYGR	Eukarya	ZYROOD004378g	Zygosaccharomyces rouxii (strain ATCC 2623 / CBS 732 / IFO 1130	956
2533	C5FX97	C5FX97 NANOT	Eukarya	MCYG_07756	Nannizzia otiae (strain CBS 113480) (Microsporium canis) (Arthrode	963
2534	C5GV97	C5GV97 AJEDR	Eukarya	BDCG_08527	Ajellomyces dermatitidis (strain ER-3) (Blastomyces dermatitidis)	962
2535	C5JCH2	C5JCH2 AJEDS	Eukarya	BDBG_00156	Ajellomyces dermatitidis (strain SLH14081) (Blastomyces dermatiti	962
2536	C5P2Y5	C5P2Y5 COCP7	Eukarya	CPC735_039370	Coccidioides posadasii (strain C735) (Valley fever fungus)	1023
2537	C5YTZ0	C5YTZ0 SORBI	Eukarya	Sb08g008230 SORBIDRAF	Sorghum bicolor (Sorghum) (Sorghum vulgare)	1006
2538	C6HAV6	C6HAV6 AJECH	Eukarya	HCDG_03838	Ajellomyces capsulata (strain H143) (Darling's disease fungus) (His	961
2539	C7GNT1	C7GNT1 YEAS2	Eukarya	ALA1_C1Q_01924	Saccharomyces cerevisiae (strain JAY291) (Baker's yeast)	958
2540	C7YI88	C7YI88 NECH7	Eukarya	NECHADRAFT_90315	Nectria haematococca (strain 77-13-4 / FGSC 9596 / MPVI) (Fusari	956
2541	C8ZH87	C8ZH87 YEAS8	Eukarya	EC1118_104_5787g	Saccharomyces cerevisiae (strain Lalvin EC1118 / Prise de mousse)	958
2542	D0N2D2	D0N2D2 PHYIN	Eukarya	PITG_04918	Phytophthora infestans T30-4	897
2543	D0NJY9	D0NJY9 PHYIN	Eukarya	PITG_12961	Phytophthora infestans T30-4	980
2544	D1ZN82	D1ZN82 SORMK	Eukarya	SMAC_05794	Sordaria macrospora (strain ATCC MYA-333 / DSM 997 / K(L3346)	961
2545	D2I6M4	D2I6M4 AILME	Eukarya	PANDA_021488	Ailuropoda melanoleuca (Giant panda)	976
2546	D4AQA4	D4AQA4 ARTBC	Eukarya	ARB_06411	Arthroderma benhamiae (strain CBS 112371) (Trichophyton menta	954
2547	D5GHQ8	D5GHQ8_9PEZI	Eukarya	GSTUM_00007997001	Tuber melanosporum (Perigord truffle)	959
2548	D6WJA8	D6WJA8 TRICA	Eukarya	TcasGA2_TC013061	Tribolium castaneum (Red flour beetle)	965
2549	D7KFW7	D7KFW7 ARALY	Eukarya	ARALYDRAFT_474152	Arabidopsis lyrata subsp. lyrata	955
2550	D7M1J4	D7M1J4 ARALY	Eukarya	ARALYDRAFT_910279	Arabidopsis lyrata subsp. lyrata	978
2551	D7T7J0	D7T7J0 VITVI	Eukarya	VIT_00024320001	Vitis vinifera (Grape)	960
2552	D7T9F5	D7T9F5 VITVI	Eukarya	VIT_00012030001	Vitis vinifera (Grape)	1026
2553	D7U4W0	D7U4W0 VITVI	Eukarya	VIT_00023918001	Vitis vinifera (Grape)	1006
2554	D8LCV6	D8LCV6 ECTSI	Eukarya	ALARS_Esi_0111_0055	Ectocarpus siliculosus (Brown alga)	1122
2555	D8M1P4	D8M1P4 BLAHO	Eukarya	GSBLH_T00002066001	Blastocystis hominis	935
2556	D8Q8F8	D8Q8F8 SCHCM	Eukarya	SCHCODRAFT_82606	Schizophyllum commune (strain H4-8 / FGSC 9210) (Split gill fungi	949
2557	D8SHA2	D8SHA2 SELML	Eukarya	SELMODRAFT_116848	Selaginella moellendorffii (Spikemoss)	934
2558	D8TCM1	D8TCM1 SELML	Eukarya	SELMODRAFT_136926	Selaginella moellendorffii (Spikemoss)	920
2559	D8TQJ5	D8TQJ5 VOLCA	Eukarya	VOLCADRAFT_89008	Volvox carteri f. nagariensis	980
2560	D8TVU1	D8TVU1 VOLCA	Eukarya	VOLCADRAFT_120886	Volvox carteri f. nagariensis	1143
2561	E0VL09	E0VL09 PEDHC	Eukarya	Phum_PHUM278150	Pediculus humanus subsp. corporis (Body louse)	983
2562	E1FMK3	E1FMK3 LOALO	Eukarya	LOAG_01219	Loa loa (Eye worm)	967
2563	E2A1R5	E2A1R5 9HYME	Eukarya	EAG_06924	Camponotus floridanus	968
2564	E2BBY0	E2BBY0 9HYME	Eukarya	EAI_01167	Harpegnathos saltator	972
2565	Q0D226	Q0D226 ASPTN	Eukarya	ATEG_00008	Aspergillus terreus (strain NIH 2624 / FGSC A1156)	968
2566	Q0UU60	Q0UU60 PHANO	Eukarya	SNOG_04704	Phaeosphaeria nodorum (Glume blotch fungus) (Septoria nodorum)	960
2567	Q10A14	Q10A14 ORYSJ	Eukarya	Os10g0182000 LOC_Os10g	Oryza sativa subsp. japonica (Rice)	999
2568	Q17LY0	Q17LY0 AEDAE	Eukarya	AAEL001218 AaeL_AAEL00	Aedes aegypti (Yellowfever mosquito) (Culex aegypti)	966
2569	Q1LVL2	Q1LVL2 DANRE	Eukarya	aars_CH211-22301.6-001	Danio rerio (Zebrafish) (Brachydanio rerio)	966
2570	Q1LVL3	Q1LVL3 DANRE	Eukarya	aars_CH211-22301.6-002	Danio rerio (Zebrafish) (Brachydanio rerio)	991
2571	Q29NZ1	Q29NZ1 DROPS	Eukarya	GA12250 Dpse\GA12250 D	Drosophila pseudoobscura pseudoobscura (Fruit fly)	966
2572	Q3T232	Q3T232 MOUSE	Eukarya	Aars	Mus musculus (Mouse)	968
2573	Q3UD67	Q3UD67 MOUSE	Eukarya	Aars	Mus musculus (Mouse)	968
2574	Q4P3T0	Q4P3T0 USTMA	Eukarya	UM05233.1	Ustilago maydis (Smut fungus)	990

2575	Q5ZKF3	Q5ZKF3_CHICK	Eukarya	RCJMB04_11d4	Gallus gallus (Chicken)	913
2576	Q6BZ68	Q6BZ68_DEBHA	Eukarya	DEHA2A03652g	Debaryomyces hansenii (Yeast) (Torulaspora hansenii)	1021
2577	Q6CFS9	Q6CFS9_YARLI	Eukarya	YALI0B04180g	Yarrowia lipolytica (Candida lipolytica)	960
2578	Q6CLJ9	Q6CLJ9_KLULA	Eukarya	KLLA0F02431g	Kluyveromyces lactis (Yeast) (Candida sphaerica)	956
2579	Q6FV21	Q6FV21_CANGA	Eukarya	CAGL0E05390g	Candida glabrata (Yeast) (Torulopsis glabrata)	956
2580	Q6XMP4	Q6XMP4_MOUSE	Eukarya	Aars	Mus musculus (Mouse)	968
2581	Q759B4	Q759B4_ASHGS	Eukarya	ADR363C_AGOS_ADR363C	Ashbya gossypii (Yeast) (Eremothecium gossypii)	956
2582	Q7Q1N8	Q7Q1N8_ANOGA	Eukarya	AGAP009701	Anopheles gambiae (African malaria mosquito)	946
2583	Q7SHP9	Q7SHP9_NEUCR	Eukarya	B5K2.190_NCU02566	Neurospora crassa	961