

**Table S4: The 50 most abundant 16S rRNA gene OTUs**

OTU	Number of sequences	Relative abundance (%) LT	Relative abundance (%) HT	Phylum	Taxonomy (Silva v138), NCBI best BLAST hit and GenBank accession no., similarity (%)
OTU00001	289,015	8.2	6.1	<i>Firmicutes</i>	<i>Oscillospiraceae</i> UCG-005 (99.6%), <i>Oscillibacter</i> sp. strain 128x MK287653.1, 91.3%
OTU00002	241,040	1.3	11.4	<i>Firmicutes</i>	<i>Solibacillus</i> (99.6%), <i>Solibacillus silvestris</i> strain UF03 KF717516.1, 100%
OTU00003	185,984	1.3	8.5	<i>Proteobacteria</i>	<i>Acinetobacter</i> (100%), <i>Acinetobacter lwoffii</i> strain P40 MT323129.1, 100%
OTU00004	128,365	1.6	5.1	<i>Firmicutes</i>	<i>Bacillus</i> (98%), <i>Bacillus</i> sp. DSL09-2 AB576893.1, 99.6%
OTU00005	91,422	2.6	2.0	<i>Firmicutes</i>	<i>Oscillospiraceae</i> UCG-005 (100%), <i>Monoglobus pectinilyticus</i> strain ASD1037 MK615117.1, 93.7%
OTU00006	79,040	2.7	1.4	<i>Firmicutes</i>	<i>Peptostreptococcaceae</i> (100%), <i>Romboutsia</i> sp. CE17 CP051144.1, 100%
OTU00007	74,814	1.8	1.9	<i>Bacteroidetes</i>	<i>Prevotellaceae</i> UCG-004 (88.5%), <i>Bacteroides gallinarum</i> strain Bg MT152630.1, 88.6%
OTU00008	55,633	1.5	1.3	<i>Bacteroidetes</i>	<i>Bacteroides</i> (92.1%), <i>Bacteroides</i> sp. Marseille-P3684 LT985388.1, 92.5%
OTU00009	55,207	1.5	1.2	<i>Firmicutes</i>	<i>Planococcaceae</i> (99.6%), <i>Lysinibacillus sphaericus</i> strain KCCM 35418 CP026120.1, 100%
OTU00010	45,924	1.2	1.0	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> RC9 gut group (90.5%)
OTU00011	45,651	1.4	1.0	<i>Firmicutes</i>	<i>Peptostreptococcaceae</i> (100%), <i>Enterococcus faecalis</i> strain BFFF11 CP045918.1, 100%
OTU00012	36,880	1.0	0.8	<i>Firmicutes</i>	<i>Oscillospiraceae</i> UCG-005 (100%), <i>Oscillibacter</i> sp. strain 128x MK287653.1, 95.3%
OTU00013	36,595	0.9	0.9	<i>Bacteroidetes</i>	<i>Bacteroides</i> (92.5%), <i>Bacteroides plebeius</i> DSM 17135 NR_041277.1, 92.5%
OTU00014	34,271	1.0	0.6	<i>Firmicutes</i>	<i>Planococcaceae</i> (100%), <i>Lysinibacillus pakistanensis</i> strain J20BS9 MT415995.1, 100%
OTU00015	33,558	1.2	0.5	<i>Firmicutes</i>	<i>Peptostreptococcaceae</i> (99.2%), <i>Clostridioides difficile</i> strain TW11-RT078 CP035499.1, 99.2%
OTU00016	30,900	0.8	0.7	<i>Firmicutes</i>	<i>Oscillospiraceae</i> UCG-005 (98.8%), <i>Oscillibacter</i> sp. strain 128x MK287653.1, 90.1%
OTU00017	30,226	0.7	0.8	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> RC9 gut group (91.7%)
OTU00018	25,949	0.9	0.4	<i>Firmicutes</i>	<i>Clostridia</i> (99.2%), <i>Clostridiales</i> bacterium P40 AB730752.1, 93.68%
OTU00019	23,250	0.7	0.5	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> RC9 gut group (90.9%)
OTU00020	20,683	0.7	0.4	<i>Firmicutes</i>	<i>Mogibacterium</i> (98.8%), <i>Mogibacterium timidum</i> strain KCOM MT242492.1, 94.5%
OTU00021	20,366	0.6	0.5	<i>Firmicutes</i>	uncultured <i>Ruminococcaceae</i> (92.5%), <i>Ruminococcus</i> sp. strain FBDS KY643811.1, 91.7%
OTU00022	20,316	0.1	0.9	<i>Firmicutes</i>	<i>Planococcaceae</i> (99.6%), <i>Psychrobacillus psychrodurans</i> strain EB313 MH127767.1, 100%
OTU00023	20,114	0.5	0.5	<i>Bacteroidetes</i>	<i>Alistipes</i> (94.9%), <i>Alistipes fingoldii</i> strain DSM 17242 NR_102944.1, 96.1%
OTU00024	19,425	0.5	0.5	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> RC9 gut group (90.9%),

OTU00025	19,212	0.9	0.1	<i>Actinobacteria</i>	<i>Corynebacterium</i> (99.6%), <i>Corynebacterium kutscheri</i> strain NCTC3655 LR134407.1, 99.6%
OTU00026	19,171	0.7	0.3	<i>Euryarchaeota</i>	<i>Methanobrevibacter</i> (99.2%), <i>Methanobrevibacter</i> sp. YE315 CP010834.1, 100%
OTU00027	18,306	0.3	0.6	<i>Bacteroidetes</i>	<i>Bacteroidales</i> p-2534-18B5 gut group (86.6%), <i>Anaerocella delicata</i> strain WN081 NR_132392.1, 87.8%
OTU00028	18,196	0.5	0.4	<i>Bacteroidetes</i>	<i>Bacteroides</i> (92.1%), <i>Bacteroides coprocola</i> DSM 17136 NR_041278.1, 92.1%
OTU00029	16,881	0.5	0.3	<i>Firmicutes</i>	<i>Oscillospiraceae</i> UCG-005 (97.2%), <i>Oscillibacter</i> sp. strain 128x MK287653.1, 94.5%
OTU00030	16,430	0.5	0.3	<i>Firmicutes</i>	<i>Christensenellaceae</i> R-7 group (96%), <i>Bacterium</i> R2 JN688050.1, 97.2%
OTU00031	16,351	0.5	0.3	<i>Bacteroidetes</i>	<i>Anaerocella delicata</i> strain WN081 NR_132392.1, 87.1%
OTU00032	16,174	0.5	0.3	<i>Firmicutes</i>	<i>Christensenellaceae</i> R-7 group (95.3%), <i>Bacterium</i> AC2043 KF697809.1, 95.3%
OTU00033	16,164	0.4	0.4	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> RC9 gut group (91.3%)
OTU00034	15,214	0.4	0.4	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> dgA-11 gut group (89.3%)
OTU00035	15,190	0.4	0.4	<i>Bacteroidetes</i>	<i>Bacteroides</i> (94.9%), <i>Bacteroides plebeius</i> DSM 17135 NR_041277.1, 94.9%
OTU00036	15,148	0.2	0.6	<i>Actinobacteria</i>	<i>Arthrobacter</i> (100%), <i>Arthrobacter citreus</i> strain Y34A9 MT367753.1, 100%
OTU00037	15,099	0.4	0.4	<i>Firmicutes</i>	<i>Butyricicoccaceae</i> UCG-009 (93.7%), <i>Papillibacter cinnamivorans</i> strain CIN1 NR_025025.1, 93.7%
OTU00038	15,024	0.5	0.2	<i>Firmicutes</i>	<i>Clostridia</i> (100%), Rumen bacterium strain XS0-10 MH594342.1, 100%
OTU00039	14,711	0.4	0.4	<i>Bacteroidetes</i>	<i>Prevotellaceae</i> UCG-003 (92%), <i>Alloprevotella</i> sp. feline oral taxon 309 KM462157.1, 93.7%
OTU00040	13,842	0.4	0.3	<i>Firmicutes</i>	uncultured <i>Lachnospiraceae</i> (99.2%), <i>Anaerotignum faecicola</i> strain KGMB03357 NR_165727.1, 98%
OTU00041	13,733	0.4	0.3	<i>Bacteroidetes</i>	<i>Alistipes</i> (94.9%), <i>Alistipes fingoldii</i> strain DSM 17242 NR_102944.1, 95.7%
OTU00042	13,493	0.4	0.2	<i>Firmicutes</i>	<i>Christensenellaceae</i> R-7 group (96.8%), <i>Bacterium</i> AC2043 KF697809.1, 96.1%
OTU00043	13,473	0.4	0.3	<i>Firmicutes</i>	<i>Christensenellaceae</i> R-7 group (96.8%), <i>Christensenellaceae</i> bacterium LC333712.1, 97.6%
OTU00044	13,284	0.4	0.3	<i>Firmicutes</i>	<i>Anaerovoracaceae</i> Family XIII AD3011 group (97.6%), <i>Emergencia timonensis</i> strain SN18 NR_144737.1, 95.2%
OTU00045	13,150	0.5	0.1	<i>Firmicutes</i>	<i>Lachnospiraceae</i> NK3A20 group (99.6%), <i>Bacterium</i> strain DSM_11001 MN336244.1, 99.6%
OTU00046	12,955	0.3	0.3	<i>Firmicutes</i>	<i>Planococcaceae</i> (99.2%), <i>Solibacillus isronensis</i> strain Ba2SD-3 MT373594.1, 99.2%
OTU00047	12,948	0.3	0.3	<i>Firmicutes</i>	<i>Bacteria</i> (93.7%), <i>Monoglobus pectinilyticus</i> strain ASD1037 MK615117.1, 92.9%
OTU00048	12,924	0.3	0.3	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> RC9 gut group (92.5%), %)
OTU00049	12,471	0.3	0.4	<i>Bacteroidetes</i>	<i>Rikenellaceae</i> dgA-11 gut group (89.7%), %)
OTU00050	12,466	0.4	0.2	<i>Tenericutes</i>	<i>Mollicutes</i> RF39 (98%), <i>Spiroplasma velocrescens</i> strain MQ-4 NR_025713.1, 87.7%