

Supplementary Table S1 Statistical results of high-quality clean tags

Sample	Raw_Tags	Valid_Tags	Valid%	Q20%	Q30%
Con_S_1	37008	16714	45.16	99.41	96.54
Con_S_2	40522	18963	46.80	99.39	96.43
Con_S_3	39772	18628	46.84	99.43	96.55
Con_S_4	48840	19947	40.84	99.43	96.66
Con_S_5	51938	21915	42.19	99.44	96.75
Con_S_6	42848	19637	45.83	99.42	96.63
Con_C_1	27908	13052	46.77	99.43	96.61
Con_C_2	26166	12383	47.32	99.45	96.84
Con_C_3	25810	11151	43.20	99.43	96.77
Con_C_4	46272	21679	46.85	99.37	96.48
Con_C_5	24702	11141	45.10	99.39	96.50
Con_C_6	68240	31850	46.67	99.39	96.49
Con_F_1	57192	26811	46.88	99.10	95.00
Con_F_2	56856	26365	46.37	99.12	95.15
Con_F_3	71306	33018	46.30	99.14	95.24
Con_F_4	71108	32358	45.51	99.14	95.31
Con_F_5	39800	17896	44.96	98.71	93.28
Con_F_6	66744	31478	47.16	99.12	95.18
AP_S_1	40776	12357	30.30	95.76	83.39
AP_S_2	27596	12673	45.92	99.02	94.80
AP_S_3	39782	17435	43.83	98.92	94.36
AP_S_4	33502	15609	46.59	98.98	94.58
AP_S_5	36282	16911	46.61	99.00	94.63
AP_S_6	38606	17474	45.26	99.10	95.16
AP_C_1	32728	15457	47.23	99.09	95.01
AP_C_2	28966	13720	47.37	98.98	94.47
AP_C_3	38596	18362	47.57	99.13	95.27
AP_C_4	68018	31091	45.71	98.86	94.12
AP_C_5	37320	17403	46.63	99.50	97.10
AP_C_6	57896	27305	47.16	98.99	94.62
AP_F_1	48946	22707	46.39	98.99	94.66
AP_F_2	69448	31967	46.03	98.72	93.26
AP_F_3	51606	23203	44.96	98.75	93.40
AP_F_4	52990	24028	45.34	98.67	92.99
AP_F_5	49878	22620	45.35	98.95	94.40
AP_F_6	53564	23834	44.50	99.00	94.62

Supplementary Table S2 Statistical results of OTUs in small intestine of AP rats

OTU ID	AP_S_1	AP_S_2	AP_S_3	AP_S_4	AP_S_5	AP_S_6	Taxonomy
OTU24	185.00	612.00	568.00	289.00	5129.00	5566.00	s__Lactobacillus_unclassified
OTU663	15.00	21.00	19.00	6.00	157.00	161.00	s__Bacilli_unclassified
OTU531	1.00	4.00	2.00	7.00	6.00	5.00	s__Porphyromonadaceae_unclassified
OTU4000	77.00	255.00	1275.00	388.00	867.00	944.00	s__Romboutsia_unclassified
OTU528	66.00	7.00	13.00	9.00	240.00	252.00	s__Lactobacillus_unclassified
OTU8046	260.00	17.00	39.00	11.00	218.00	149.00	s__uncultured_Lactobacillus_sp.
OTU427	215.00	84.00	84.00	73.00	804.00	879.00	s__Lactobacillus_murinus
OTU39	30.00	106.00	186.00	343.00	698.00	726.00	s__Turicibacter_unclassified
OTU6321	1.00	3.00	2.00	16.00	55.00	82.00	s__Clostridiaceae_1_unclassified
OTU8	1036.00	624.00	914.00	1584.00	689.00	651.00	s__Lactobacillus_mucosae
OTU49	175.00	441.00	448.00	2796.00	152.00	133.00	s__Lactobacillus_sp._L-YJ
OTU31	695.00	1215.00	1971.00	1022.00	1110.00	1094.00	s__Lactobacillus_unclassified
OTU20	4.00	16.00	37.00	1009.00	469.00	510.00	s__Escherichia_unclassified
OTU52	13.00	997.00	137.00	231.00	69.00	68.00	s__Streptococcus_sp._GDLAMI-SD2
OTU74	28.00	1926.00	749.00	144.00	123.00	115.00	s__Gemella_unclassified
OTU326	2027.00	322.00	551.00	338.00	322.00	311.00	s__Lactobacillus_unclassified
OTU330	407.00	101.00	122.00	792.00	34.00	41.00	s__uncultured_Lactobacillus_sp.
OTU48	446.00	221.00	446.00	2260.00	19.00	36.00	s__Lactobacillus_unclassified
OTU450	46.00	5.00	18.00	34.00	67.00	38.00	s__Aerococcaceae_unclassified
OTU8197	38.00	6.00	22.00	2.00	13.00	10.00	s__Romboutsia_unclassified
OTU3394	4.00	70.00	78.00	163.00	13.00	18.00	s__Rothia_unclassified

OTU3785	2.00	70.00	5.00	4.00	342.00	332.00	s__Clostridium sensu stricto_unclassified
OTU1524	16.00	10.00	22.00	371.00	154.00	179.00	s__Enterobacteriaceae_unclassified
OTU715	76.00	10.00	7.00	30.00	19.00	13.00	s__Lactobacillus_reuteri
OTU6629	12.00	13.00	80.00	20.00	56.00	68.00	s__Peptostreptococcaceae_unclassified
OTU152	255.00	126.00	1.00	2.00	41.00	33.00	s__Pasteurellaceae_unclassified
OTU28	15.00	269.00	133.00	36.00	37.00	36.00	s__Veillonella_unclassified
OTU758	133.00	485.00	212.00	43.00	45.00	43.00	s__Bacillales_unclassified
OTU110	1.00	118.00	71.00	39.00	6.00	9.00	s__Streptococcus_unclassified
OTU918	10.00	82.00	371.00	10.00	24.00	11.00	s__uncultured_Anaerorhabdus_sp.
OTU154	7.00	828.00	1.00	1.00	20.00	28.00	s__Granulicatella_unclassified
OTU8317	134.00	19.00	12.00	49.00	2.00	1.00	s__Lactobacillus_gasseri
OTU85	2.00	2.00	4.00	7.00	4.00	10.00	s__Globicatella_sp._canine_oral_taxon_107
OTU8368	27.00	1.00	9.00	3.00	8.00	4.00	s__Romboutsia_unclassified
OTU7763	14.00	2.00	8.00	1.00	4.00	2.00	s__Peptostreptococcaceae_unclassified
OTU132	8.00	805.00	206.00	81.00	5.00	8.00	s__Globicatella_sp._canine_oral_taxon_218
OTU7411	35.00	21.00	83.00	6.00	6.00	1.00	s__Romboutsia_unclassified
OTU8838	83.00	4.00	6.00	5.00	2.00	5.00	s__uncultured_Lactobacillus_sp.
OTU557	33.00	184.00	67.00	26.00	3.00	4.00	s__Firmicutes_unclassified
OTU8501	59.00	2.00	4.00	1.00	7.00	1.00	s__Lactobacillales_unclassified
OTU134	1.00	254.00	125.00	85.00	5.00	2.00	s__Facklamia_unclassified
OTU673	52.00	2.00	2.00	2.00	4.00	1.00	s__Bacteria_unclassified
OTU485	5.00	17.00	34.00	2.00	2.00	1.00	s__Bacteroides_uniformis

Supplementary Table S3 Statistical results of OTUs in colon of AP rats

OTU ID	AP_C_1	AP_C_2	AP_C_3	AP_C_4	AP_C_5	AP_C_6	Taxonomy
OTU24	16.00	396.00	11.00	534.00	764.00	942.00	s__Lactobacillus_unclassified
OTU4000	8268.00	9560.00	12480.00	3273.00	170.00	454.00	s__Romboutsia_unclassified
OTU3722	1619.00	445.00	1848.00	1115.00	35.00	26.00	s__Clostridium sensu stricto_unclassified
OTU427	1.00	78.00	3.00	107.00	34.00	165.00	s__Lactobacillus_murinus
OTU39	12.00	522.00	54.00	12283.00	393.00	523.00	s__Turicibacter_unclassified
OTU8	18.00	32.00	22.00	778.00	370.00	1073.00	s__Lactobacillus_mucosae
OTU49	9.00	20.00	11.00	2302.00	2194.00	3418.00	s__Lactobacillus_sp._L-YJ
OTU31	20.00	76.00	30.00	1940.00	468.00	1620.00	s__Lactobacillus_unclassified
OTU20	587.00	2.00	51.00	47.00	2452.00	2396.00	s__Escherichia_unclassified
OTU52	17.00	33.00	1.00	747.00	81.00	105.00	s__Streptococcus_sp._GDLAMI-SD2
OTU4574	369.00	76.00	437.00	192.00	1.00	10.00	s__Clostridium sensu stricto_unclassified
OTU74	93.00	120.00	126.00	1373.00	309.00	393.00	s__Gemella_unclassified
OTU326	1.00	1.00	5.00	6.00	34.00	9.00	s__Lactobacillus_unclassified
OTU330	1.00	4.00	3.00	778.00	195.00	997.00	s__uncultured_Lactobacillus_sp.
OTU48	1.00	16.00	6.00	382.00	1.00	105.00	s__Lactobacillus_unclassified
OTU4307	1743.00	59.00	468.00	635.00	9.00	13.00	s__Clostridiaceae_1_unclassified
OTU8197	175.00	250.00	243.00	90.00	1.00	9.00	s__Romboutsia_unclassified
OTU1524	211.00	3.00	15.00	17.00	307.00	925.00	s__Enterobacteriaceae_unclassified
OTU6629	161.00	170.00	326.00	30.00	3.00	3.00	s__Peptostreptococcaceae_unclassified
OTU5080	7.00	1.00	2.00	3.00	136.00	371.00	s__Clostridium sensu stricto_unclassified
OTU758	2.00	8.00	6.00	3.00	33.00	1.00	s__Bacillales_unclassified

OTU110	3.00	6.00	5.00	225.00	18.00	16.00	s__Streptococcus_unclassified
OTU918	13.00	9.00	17.00	2.00	19.00	23.00	s__uncultured_Anaerorhabdus_sp.
OTU8368	8.00	21.00	17.00	2.00	2.00	1.00	s__Romboutsia_unclassified
OTU7737	15.00	24.00	43.00	3.00	1.00	2.00	s__Romboutsia_unclassified
OTU132	7.00	3.00	10.00	108.00	10.00	19.00	s__Globicatella_sp._canine_oral_taxon_218
OTU4450	347.00	17.00	90.00	111.00	1.00	6.00	s__Clostridium_sensu_stricto_unclassified
OTU4982	39.00	73.00	5.00	334.00	254.00	270.00	s__Terrisporobacter_unclassified
OTU3625	9.00	2.00	5.00	53.00	7.00	8.00	s__Lachnospiraceae_unclassified
OTU4103	7.00	2.00	4.00	9.00	6237.00	8349.00	s__Peptostreptococcaceae_unclassified
OTU4128	65.00	15.00	4.00	815.00	11.00	21.00	s__Clostridium_sensu_stricto_unclassified

Supplementary Table S4 Statistical results of OTUs in feces of AP rats

OTU ID	AP_F_1	AP_F_2	AP_F_3	AP_F_4	AP_F_5	AP_F_6	Taxonomy
OTU24	107.00	72.00	8.00	132.00	142.00	58.00	s__Lactobacillus_unclassified
OTU448	14.00	258.00	664.00	18.00	10.00	203.00	s__Porphyromonadaceae_unclassified
OTU81	15.00	515.00	733.00	652.00	97.00	310.00	s__Paraprevotella_unclassified
OTU516	18.00	747.00	320.00	215.00	33.00	171.00	s__Bacteroidales_unclassified
OTU729	15.00	212.00	327.00	127.00	82.00	270.00	s__Porphyromonadaceae_unclassified
OTU3605	1.00	190.00	63.00	14.00	193.00	14.00	s__Roseburia_unclassified
OTU426	12.00	635.00	272.00	91.00	60.00	82.00	s__Prevotella_unclassified
OTU451	14.00	312.00	219.00	262.00	156.00	411.00	s__Porphyromonadaceae_unclassified
OTU562	8.00	250.00	97.00	161.00	328.00	112.00	s__Porphyromonadaceae_unclassified
OTU851	21.00	95.00	59.00	51.00	47.00	82.00	s__Porphyromonadaceae_unclassified
OTU22	28.00	1329.00	228.00	1258.00	392.00	213.00	s__Phascolarctobacterium_unclassified
OTU3951	1.00	8.00	3.00	15.00	28.00	27.00	s__Lachnospiraceae_unclassified
OTU377	4.00	282.00	178.00	117.00	145.00	148.00	s__Porphyromonadaceae_unclassified
OTU624	11.00	316.00	255.00	66.00	149.00	177.00	s__Porphyromonadaceae_unclassified
OTU420	26.00	358.00	241.00	2944.00	55.00	468.00	s__Prevotella_unclassified
OTU719	16.00	171.00	118.00	1518.00	21.00	163.00	s__Prevotella_unclassified
OTU531	13.00	678.00	278.00	170.00	100.00	241.00	s__Porphyromonadaceae_unclassified
OTU3410	2.00	10.00	12.00	3.00	29.00	23.00	s__Lachnospiraceae_unclassified
OTU3380	9.00	124.00	102.00	17.00	159.00	115.00	s__Flavonifractor_unclassified

OTU4000	309.00	203.00	26.00	97.00	185.00	55.00	s__Romboutsia_unclassified
OTU838	2.00	53.00	34.00	7.00	3.00	59.00	s__Barnesiella_unclassified
OTU441	1.00	67.00	39.00	16.00	52.00	77.00	s__Porphyromonadaceae_unclassified
OTU29	546.00	40.00	184.00	779.00	30.00	454.00	s__Parasutterella_unclassified
OTU1335	2.00	18.00	40.00	5.00	1.00	8.00	s__Lachnospiraceae_unclassified
OTU519	4.00	15.00	65.00	108.00	35.00	72.00	s__Porphyromonadaceae_unclassified
OTU884	1.00	53.00	32.00	20.00	3.00	2.00	s__Porphyromonadaceae_unclassified
OTU3722	3673.00	361.00	40.00	57.00	801.00	17.00	s__Clostridium sensu stricto_unclassified
OTU600	1.00	59.00	40.00	16.00	23.00	21.00	s__Porphyromonadaceae_unclassified
OTU586	1.00	1.00	4.00	22.00	1.00	38.00	s__Porphyromonadaceae_unclassified
OTU25	4.00	115.00	53.00	87.00	98.00	24.00	s__uncultured_Bilophila_sp.
OTU1223	2.00	95.00	37.00	15.00	18.00	59.00	s__Porphyromonadaceae_unclassified
OTU881	3.00	61.00	76.00	38.00	12.00	44.00	s__Porphyromonadaceae_unclassified
OTU494	3.00	29.00	14.00	31.00	42.00	55.00	s__Porphyromonadaceae_unclassified
OTU8046	4.00	5.00	1.00	6.00	3.00	2.00	s__uncultured_Lactobacillus_sp.
OTU3871	3.00	24.00	10.00	1.00	11.00	23.00	s__Helicobacter_unclassified
OTU522	5.00	69.00	40.00	175.00	47.00	55.00	s__Porphyromonadaceae_unclassified
OTU427	16.00	16.00	1.00	22.00	25.00	9.00	s__Lactobacillus_murinus
OTU844	1.00	87.00	37.00	16.00	22.00	14.00	s__Porphyromonadaceae_unclassified
OTU550	16.00	37.00	64.00	103.00	51.00	115.00	s__uncultured_Barnesiella_sp.
OTU3459	7.00	100.00	85.00	27.00	104.00	70.00	s__Oscillibacter_unclassified
OTU808	2.00	23.00	22.00	18.00	11.00	29.00	s__Porphyromonadaceae_unclassified
OTU3361	4.00	460.00	270.00	134.00	244.00	167.00	s__Ruminococcaceae_unclassified

OTU703	4.00	95.00	38.00	37.00	153.00	68.00	s__Porphyromonadaceae_unclassified
OTU3541	8.00	58.00	73.00	10.00	73.00	114.00	s__Ruminococcaceae_unclassified
OTU39	89.00	36.00	7.00	29.00	9.00	23.00	s__Turicibacter_unclassified
OTU846	2.00	233.00	62.00	28.00	11.00	25.00	s__Bacteroidales_unclassified
OTU3622	3.00	324.00	17.00	6.00	10.00	15.00	s__Lachnospiraceae_unclassified
OTU765	2.00	15.00	13.00	30.00	5.00	17.00	s__Porphyromonadaceae_unclassified
OTU512	49.00	654.00	584.00	1358.00	499.00	723.00	s__Bacteroides_unclassified
OTU590	5.00	42.00	21.00	76.00	6.00	70.00	s__Porphyromonadaceae_unclassified
OTU637	2.00	84.00	12.00	7.00	9.00	11.00	s__uncultured_Barnesiella_sp.
OTU533	3.00	111.00	89.00	41.00	63.00	134.00	s__Parabacteroides_unclassified
OTU3627	3.00	27.00	16.00	2.00	78.00	58.00	s__Oscillibacter_unclassified
OTU3993	3.00	1.00	5.00	1.00	1.00	2.00	s__Ruminococcaceae_unclassified
OTU629	4.00	159.00	42.00	134.00	53.00	48.00	s__Porphyromonadaceae_unclassified
OTU567	9.00	126.00	92.00	72.00	148.00	69.00	s__Porphyromonadaceae_unclassified
OTU696	1.00	81.00	60.00	125.00	6.00	67.00	s__Porphyromonadaceae_unclassified
OTU988	1.00	7.00	3.00	3.00	3.00	1.00	s__Porphyromonadaceae_unclassified
OTU738	1.00	44.00	27.00	18.00	72.00	2.00	s__Porphyromonadaceae_unclassified
OTU572	1.00	9.00	7.00	13.00	1.00	20.00	s__Porphyromonadaceae_unclassified
OTU3397	3.00	33.00	21.00	3.00	47.00	14.00	s__Lachnospiraceae_unclassified
OTU3833	1.00	12.00	33.00	1.00	2.00	97.00	s__Bacteroidales_unclassified
OTU507	12.00	71.00	26.00	78.00	9.00	102.00	s__Porphyromonadaceae_unclassified
OTU3381	5.00	25.00	53.00	46.00	232.00	55.00	s__Ruminococcaceae_unclassified
OTU1123	1.00	34.00	43.00	12.00	1.00	2.00	s__Porphyromonadaceae_unclassified

OTU643	6.00	174.00	137.00	53.00	96.00	85.00	s__Porphyromonadaceae_unclassified
OTU649	5.00	74.00	83.00	69.00	167.00	83.00	s__Porphyromonadaceae_unclassified
OTU615	2.00	4.00	9.00	17.00	9.00	12.00	s__Porphyromonadaceae_unclassified
OTU837	1.00	7.00	40.00	14.00	3.00	15.00	s__Porphyromonadaceae_unclassified
OTU873	2.00	2.00	7.00	6.00	1.00	6.00	s__Porphyromonadaceae_unclassified
OTU3434	3.00	163.00	223.00	1.00	14.00	81.00	s__Firmicutes_unclassified
OTU1243	4.00	7.00	17.00	20.00	1.00	4.00	s__Porphyromonadaceae_unclassified
OTU127	2.00	3.00	1.00	1.00	4.00	1.00	s__Mycoplasma_sualvi
OTU1006	14.00	267.00	158.00	188.00	4.00	8.00	s__Porphyromonadaceae_unclassified
OTU3494	2.00	65.00	25.00	4.00	14.00	38.00	s__Ruminococcaceae_unclassified
OTU4019	9.00	159.00	52.00	2.00	140.00	63.00	s__Lachnospiraceae_unclassified
OTU462	1.00	83.00	59.00	70.00	7.00	25.00	s__Porphyromonadaceae_unclassified
OTU26	335.00	87.00	56.00	128.00	23.00	227.00	s__Parasutterella_unclassified
OTU7833	2.00	45.00	26.00	76.00	4.00	32.00	s__Porphyromonadaceae_unclassified
OTU558	3.00	52.00	63.00	74.00	14.00	74.00	s__Parabacteroides_unclassified
OTU3905	1.00	154.00	47.00	107.00	91.00	29.00	s__Bacteroidetes_unclassified
OTU3862	2.00	17.00	28.00	3.00	65.00	7.00	s__Ruminococcaceae_unclassified
OTU653	1.00	37.00	8.00	6.00	31.00	24.00	s__Barnesiella_unclassified
OTU3396	4.00	98.00	145.00	79.00	25.00	102.00	s__Ruminococcaceae_unclassified
OTU8	126.00	17.00	6.00	82.00	81.00	40.00	s__Lactobacillus_mucosae
OTU3445	2.00	66.00	45.00	43.00	19.00	13.00	s__Ruminococcaceae_unclassified
OTU744	10.00	210.00	85.00	225.00	12.00	78.00	s__Prevotellaceae_unclassified
OTU27	2.00	21.00	14.00	27.00	45.00	15.00	s__uncultured_Bilophila_sp.

OTU683	1.00	34.00	11.00	9.00	50.00	11.00	s__Porphyromonadaceae_unclassified
OTU3395	1.00	7.00	21.00	4.00	9.00	45.00	s__Clostridium_IV_unclassified
OTU3615	3.00	762.00	15.00	14.00	6.00	254.00	s__Firmicutes_unclassified
OTU3452	1.00	24.00	6.00	4.00	8.00	16.00	s__Ruminococcaceae_unclassified
OTU8104	2.00	21.00	4.00	6.00	23.00	8.00	s__Bacteroidales_unclassified
OTU2605	1.00	5.00	1.00	1.00	1.00	5.00	s__Porphyromonadaceae_unclassified
OTU3818	1.00	7.00	3.00	7.00	117.00	177.00	s__Lachnospiraceae_unclassified
OTU3774	18.00	105.00	103.00	114.00	224.00	210.00	s__Clostridiales_unclassified
OTU7838	137.00	50.00	19.00	73.00	2.00	2.00	s__Sutterellaceae_unclassified
OTU31	111.00	38.00	10.00	16.00	59.00	37.00	s__Lactobacillus_unclassified
OTU418	21.00	151.00	189.00	195.00	101.00	198.00	s__Parabacteroides_unclassified
OTU438	139.00	563.00	1024.00	304.00	134.00	1203.00	s__Bacteroides_unclassified
OTU3428	5.00	35.00	118.00	10.00	32.00	43.00	s__Oscillibacter_unclassified
OTU4664	4.00	64.00	50.00	4.00	30.00	27.00	s__Lachnospiraceae_unclassified
OTU440	10.00	42.00	19.00	19.00	4.00	145.00	s__Alistipes_unclassified
OTU20	2589.00	1607.00	2179.00	228.00	2825.00	576.00	s__Escherichia_unclassified
OTU541	11.00	13.00	11.00	83.00	6.00	93.00	s__Bacteroides_uniformis
OTU771	8.00	100.00	281.00	33.00	40.00	253.00	s__Bacteroidales_unclassified
OTU3402	6.00	823.00	17.00	25.00	143.00	181.00	s__Ruminococcaceae_unclassified
OTU3601	2.00	22.00	7.00	8.00	28.00	16.00	s__uncultured_Barnesiella_sp.
OTU4008	1.00	14.00	2.00	10.00	14.00	18.00	s__Coriobacteriaceae_unclassified
OTU62	2113.00	213.00	33.00	90.00	114.00	89.00	s__Allobaculum_unclassified
OTU601	5.00	24.00	25.00	4.00	1.00	22.00	s__Porphyromonadaceae_unclassified

OTU431	48.00	310.00	411.00	243.00	156.00	502.00	s__Bacteroides_unclassified
OTU3454	1.00	17.00	24.00	13.00	14.00	12.00	s__Intestinimonas_unclassified
OTU523	2.00	272.00	22.00	23.00	29.00	41.00	s__uncultured_Barnesiella_sp.
OTU477	5.00	37.00	9.00	5.00	9.00	67.00	s__Alistipes_unclassified
OTU3464	1.00	6.00	8.00	1.00	2.00	12.00	s__Ruminococcaceae_unclassified
OTU4574	975.00	120.00	14.00	25.00	154.00	5.00	s__Clostridium sensu stricto_unclassified
OTU432	78.00	30.00	10.00	61.00	14.00	254.00	s__Bacteroides_unclassified
OTU125	13.00	8.00	5.00	1.00	72.00	27.00	s__uncultured_Allobaculum_sp.
OTU3409	1.00	21.00	9.00	2.00	30.00	12.00	s__Ruminococcaceae_unclassified
OTU842	1.00	1.00	4.00	2.00	11.00	53.00	s__Porphyromonadaceae_unclassified
OTU3680	17.00	21.00	2.00	123.00	20.00	222.00	s__Clostridium XIVa_unclassified
OTU1795	1.00	6.00	5.00	3.00	1.00	5.00	s__Porphyromonadaceae_unclassified
OTU4288	1.00	7.00	3.00	1.00	5.00	7.00	s__Lachnospiraceae_unclassified
OTU48	27.00	8.00	1.00	7.00	17.00	1.00	s__Lactobacillus_unclassified
OTU3703	580.00	84.00	13.00	39.00	42.00	23.00	s__Erysipelotrichaceae_unclassified
OTU2096	4.00	10.00	5.00	8.00	7.00	12.00	s__Porphyromonadaceae_unclassified
OTU46	861.00	36.00	51.00	38.00	96.00	104.00	s__Allobaculum_unclassified
OTU702	1.00	3.00	3.00	5.00	1.00	2.00	s__Porphyromonadaceae_unclassified
OTU499	26.00	6.00	60.00	31.00	292.00	171.00	s__Bacteroides_unclassified
OTU4228	1.00	11.00	8.00	2.00	3.00	14.00	s__Ruminococcus2_unclassified
OTU5069	1.00	3.00	13.00	1.00	3.00	2.00	s__Clostridiales_unclassified
OTU1318	1.00	1.00	8.00	15.00	2.00	15.00	s__Lachnospiraceae_unclassified
OTU75	1.00	1.00	5.00	1.00	1.00	17.00	s__Enterococcus_faecalis

OTU3345	16.00	7.00	3.00	7.00	6.00	60.00	s__Olsenella_unclassified
OTU3731	1.00	4.00	6.00	17.00	4.00	16.00	s__Ruminococcaceae_unclassified
OTU850	7.00	57.00	51.00	572.00	7.00	49.00	s__uncultured_Prevotella_sp.
OTU1332	4.00	92.00	53.00	78.00	1.00	1.00	s__Porphyromonadaceae_unclassified
OTU1349	3.00	35.00	22.00	14.00	17.00	34.00	s__Porphyromonadaceae_unclassified
OTU619	5.00	34.00	15.00	26.00	12.00	93.00	s__Butyricimonas_unclassified
OTU3970	1.00	5.00	1.00	2.00	1.00	24.00	s__Clostridium IV_unclassified
OTU3492	1.00	7.00	11.00	1.00	5.00	11.00	s__Ruminococcaceae_unclassified
OTU1190	18.00	93.00	231.00	63.00	26.00	174.00	s__Bacteroides_unclassified
OTU1368	2.00	51.00	65.00	47.00	1.00	1.00	s__Bacteroides_uniformis
OTU730	1.00	12.00	4.00	11.00	7.00	14.00	s__Butyricimonas_unclassified
OTU3808	2.00	27.00	1.00	8.00	15.00	27.00	s__Clostridiales_unclassified
OTU3785	4289.00	7.00	8.00	53.00	2553.00	50.00	s__Clostridium sensu stricto_unclassified
OTU1524	1010.00	627.00	840.00	80.00	19.00	4.00	s__Enterobacteriaceae_unclassified
OTU3379	40.00	9.00	87.00	19.00	1.00	542.00	s__Fusobacterium_unclassified
OTU5333	1.00	57.00	38.00	53.00	8.00	34.00	s__Porphyromonadaceae_unclassified
OTU106	2.00	30.00	1.00	31.00	61.00	33.00	s__Allobaculum_unclassified
OTU21	283.00	6.00	134.00	11.00	10.00	737.00	s__Proteus_unclassified
OTU4793	2.00	157.00	65.00	55.00	3.00	36.00	s__Bacteria_unclassified
OTU88	11.00	2.00	16.00	2.00	1.00	46.00	s__Pasteurellaceae_unclassified
OTU110	25.00	9.00	1.00	5.00	1.00	3.00	s__Streptococcus_unclassified
OTU1636	2.00	33.00	9.00	68.00	2.00	1.00	s__Porphyromonadaceae_unclassified
OTU3481	3.00	61.00	22.00	3.00	44.00	9.00	s__Ruminococcaceae_unclassified

OTU55	1.00	267.00	2.00	22.00	91.00	6.00	s__Allobaculum_unclassified
OTU8499	60.00	42.00	80.00	12.00	42.00	9.00	s__Enterobacteriaceae_unclassified
OTU3723	88.00	2.00	42.00	4.00	4.00	268.00	s__Proteus_unclassified
OTU4399	2.00	33.00	28.00	43.00	28.00	9.00	s__Proteobacteria_unclassified
OTU1503	2.00	16.00	38.00	3.00	1.00	4.00	s__Porphyromonadaceae_unclassified
OTU348	31.00	10.00	1.00	3.00	11.00	5.00	s__Peptostreptococcaceae_unclassified
OTU3712	1.00	60.00	46.00	36.00	14.00	20.00	s__Bacteroidetes_unclassified
OTU977	5.00	129.00	67.00	32.00	34.00	96.00	s__Porphyromonadaceae_unclassified
OTU926	3.00	3.00	10.00	8.00	8.00	27.00	s__uncultured_Parabacteroides_sp.
OTU3883	1.00	1.00	5.00	8.00	39.00	15.00	s__Lachnospiraceae_unclassified
OTU1115	5.00	3.00	3.00	30.00	38.00	14.00	s__Bifidobacterium_unclassified
OTU5052	1.00	125.00	37.00	98.00	73.00	26.00	s__Bacteroidetes_unclassified
OTU3575	2.00	53.00	84.00	47.00	12.00	37.00	s__Paraprevotella_unclassified
OTU843	1.00	10.00	8.00	2.00	7.00	4.00	s__Porphyromonadaceae_unclassified
OTU2633	1.00	5.00	8.00	3.00	4.00	11.00	s__uncultured_Parabacteroides_sp.
OTU478	3.00	1.00	4.00	11.00	8.00	219.00	s__Bacteroides_unclassified
OTU1230	2.00	24.00	6.00	19.00	2.00	6.00	s__Bacteroidales_unclassified
OTU1364	1.00	14.00	5.00	8.00	1.00	1.00	s__Porphyromonadaceae_unclassified
OTU3437	2.00	12.00	20.00	1.00	15.00	18.00	s__Ruminococcaceae_unclassified
OTU3651	10.00	2.00	77.00	19.00	66.00	43.00	s__Lachnospiraceae_unclassified
OTU3315	4.00	42.00	13.00	25.00	1.00	21.00	s__Bacteroidetes_unclassified
OTU3724	2.00	5.00	37.00	12.00	7.00	58.00	s__Clostridiales_Family_XIII_Incertae_Sedis_unclassified
OTU4188	8.00	4.00	5.00	21.00	14.00	29.00	s__Lachnospiraceae_unclassified

OTU1150	1.00	15.00	11.00	137.00	1.00	6.00	s__uncultured_Prevotella_sp.
OTU3393	8.00	11.00	132.00	8.00	12.00	143.00	s__Clostridium IV_unclassified
OTU4317	1.00	2.00	43.00	4.00	7.00	23.00	s__Ruminococcaceae_unclassified
OTU3404	1.00	51.00	21.00	4.00	2.00	36.00	s__Ruminococcaceae_unclassified
OTU3889	20.00	91.00	118.00	129.00	171.00	266.00	s__Clostridium XIVa_unclassified
OTU76	1.00	2.00	2.00	8.00	20.00	1.00	s__Citrobacter_unclassified
OTU781	2.00	59.00	58.00	8.00	9.00	66.00	s__Bacteroides_unclassified
OTU3811	6.00	221.00	173.00	116.00	119.00	164.00	s__Blautia_unclassified
OTU695	2.00	81.00	71.00	343.00	165.00	19.00	s__uncultured_Bacteroides_sp.
OTU36	2.00	6.00	7.00	50.00	283.00	34.00	s__Clostridium XVIII_unclassified
OTU485	178.00	825.00	653.00	11.00	280.00	639.00	s__Bacteroides_uniformis
OTU654	15.00	25.00	12.00	38.00	8.00	114.00	s__Bacteroides_salyersiae
OTU1458	1.00	2.00	1.00	2.00	47.00	32.00	s__Porphyromonadaceae_unclassified
OTU2701	1.00	17.00	14.00	8.00	3.00	11.00	s__Porphyromonadaceae_unclassified
OTU3547	1.00	1.00	1.00	4.00	3.00	2.00	s__Ruminococcaceae_unclassified
OTU3603	1.00	1.00	2.00	2.00	3.00	4.00	s__Ruminococcaceae_unclassified
OTU4042	3.00	5.00	8.00	31.00	55.00	28.00	s__Blautia_unclassified
OTU4103	10.00	1.00	3.00	1.00	2415.00	1.00	s__Peptostreptococcaceae_unclassified
OTU4118	2.00	7.00	5.00	8.00	11.00	10.00	s__Ruminococcaceae_unclassified
OTU4128	16.00	10.00	18.00	20.00	97.00	1.00	s__Clostridium sensu stricto_unclassified
OTU4369	2.00	2.00	1.00	16.00	231.00	6.00	s__Clostridium sensu stricto_unclassified
OTU4621	3.00	13.00	22.00	20.00	29.00	8.00	s__Bacteria_unclassified

Supplementary Table S6 Analysis of bacterial composition in AP rats at genus level

Genus	AP_S_1	AP_S_2	AP_S_3	AP_S_4	AP_S_5	AP_S_6	AP_C_1	AP_C_2	AP_C_3	AP_C_4	AP_C_5	AP_C_6	AP_F_1	AP_F_2	AP_F_3	AP_F_4	AP_F_5	AP_F_6
Lactobacillus	50.28	29.26	30.37	60.12	52.14	52.66	0.43	4.76	0.50	22.62	23.88	31.28	2.28	0.53	0.12	1.61	1.95	0.69
Porphyromonadaceae_unclassified	0.39	0.10	0.20	0.76	2.59	2.48	0.03	0.07	0.01	0.05	0.51	0.47	1.20	19.43	21.47	16.17	12.26	18.19
Romboutsia	1.64	2.27	8.25	2.78	5.75	6.20	59.99	78.60	75.35	10.98	1.06	1.72	1.44	0.66	0.13	0.43	0.84	0.24
Lachnospiraceae_unclassified	4.48	0.20	0.95	2.60	0.73	0.94	0.10	0.04	0.03	0.36	0.31	0.14	0.38	8.06	4.66	5.56	6.78	3.93
Clostridium sensu stricto	0.06	0.85	1.05	1.72	5.36	5.47	15.82	4.10	13.00	7.78	9.69	8.71	44.03	1.61	0.36	0.73	17.38	0.34
Ruminococcaceae_unclassified	1.12	0.08	0.12	1.56	0.30	0.19	0.17	0.20	0.16	0.07	0.14	0.19	0.42	10.36	6.60	2.87	7.65	8.16
Turicibacter	0.26	0.84	1.08	2.23	4.15	4.19	0.08	3.82	0.29	39.87	2.27	1.93	0.39	0.11	0.03	0.12	0.04	0.10
Prevotella	1.15	0.01	0.02	0.30	0.04	0.02	0.01	0.02	0.00	0.01	0.03	0.01	0.31	4.69	3.62	25.13	0.76	3.56
Peptostreptococcaceae_unclassified	0.25	0.13	0.51	0.20	0.37	0.41	3.86	4.42	5.83	0.77	37.11	35.09	0.30	0.04	0.11	0.04	10.91	0.89
Paraprevotella	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.08	1.85	3.72	3.06	0.50	1.53
Escherichia	0.03	0.13	0.21	6.53	2.79	2.94	3.80	0.01	0.28	0.15	14.14	8.81	11.44	5.11	9.63	0.96	12.62	2.47
Bacteroides	2.01	0.41	0.48	0.23	0.08	0.02	0.00	0.02	0.02	0.21	0.41	0.31	2.55	8.98	14.85	11.65	7.21	18.35
Bacteroidales_unclassified	0.35	0.00	0.02	0.14	0.15	0.27	0.00	0.03	0.00	0.01	0.01	0.06	0.19	4.97	4.96	2.77	0.78	3.08
Clostridiales_unclassified	0.05	0.06	0.12	0.89	0.76	0.66	0.08	0.18	0.08	0.02	0.06	0.11	0.31	3.54	2.05	0.92	1.72	3.23
Bacteria_unclassified	2.62	0.28	1.14	0.66	0.24	0.14	0.00	0.01	0.00	0.26	0.08	0.23	0.09	2.59	2.54	0.98	0.21	0.45

Gemella	0.26	15.33	4.38	0.93	0.73	0.66	0.60	0.88	0.69	4.45	1.78	1.45	0.57	0.14	0.00	0.03	0.22	0.04
Roseburia	0.49	0.00	0.01	0.10	0.03	0.03	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.63	0.30	0.07	0.87	0.07
Coriobacteriaceae _unclassified	0.00	0.05	0.00	0.12	11.18	10.48	0.04	0.01	0.00	0.03	0.01	0.00	0.02	0.08	0.05	0.05	0.23	0.15
Enterobacteriaceae _unclassified	0.26	0.08	0.15	2.54	1.02	1.10	1.43	0.02	0.09	0.06	1.89	3.61	4.75	2.15	4.10	0.39	0.29	0.06
Allobaculum	0.06	0.10	0.09	0.73	0.80	0.50	0.06	0.01	0.00	0.10	0.02	0.06	14.56	1.80	0.41	0.79	1.95	1.12
Others	34.23	49.84	50.85	14.86	10.78	10.63	13.50	2.77	3.68	12.22	6.54	5.82	14.67	22.67	20.30	25.65	14.81	33.36
