

Supplementary Table S1.

The LASSO analysis of the selected species

taxa_id	coeff	coeff_abs	taxonomy_lvl
Gammaproteobacteria_3303	1.237904	1.237904	C
Clostridia_1859	0.926088	0.926088	C
Bacteroidia_912	-0.74034	0.740345	C
Actinobacteria_419	-0.48619	0.486188	C
Coriobacteriia_809	-0.25842	0.25842	C
Negativicutes_2164	-0.06405	0.064052	C
Porphyromonas_956	2.27815	2.27815	G
Butyricimonas_24614	-1.91558	1.915584	G
Faecalibacterium_2057	1.890245	1.890245	G
Ruminiclostridium 9_11357	-1.66552	1.665517	G
Bifidobacterium_436	-1.40937	1.409369	G
Sutterella_26454	1.363524	1.363524	G
Butyricoccus_2055	-1.25223	1.252225	G
Phascolarctobacterium_2168	1.212369	1.212369	G
Dialister_2183	-1.10513	1.10513	G
Christensenellaceae R-7 group_11283	-1.04101	1.041011	G
Prevotella 1_11179	0.815333	0.815333	G
[Eubacterium] coprostanoligenes group_11375	0.770506	0.770506	G
Lachnospiraceae UCG-004_11324	-0.7691	0.769104	G
Prevotella 9_11183	-0.72928	0.729283	G
Alloprevotella_961	-0.65145	0.651454	G
Parabacteroides_24660	-0.59676	0.59676	G
Oscillibacter_2063	-0.58396	0.583959	G
Alistipes_968	-0.5598	0.559805	G
Ruminococcaceae UCG-002_11360	-0.46252	0.462524	G
Subdoligranulum_2070	0.45402	0.45402	G
Proteobacteria_2375	1.125057	1.125057	P
Firmicutes_1672	0.929293	0.929293	P
Actinobacteria_400	-0.74967	0.74967	P
Bacteroidetes_905	-0.47095	0.470949	P
Porphyromonadaceae_943	4.804529	4.804529	F
Ruminococcaceae_2050	2.59247	2.59247	F
Clostridiaceae 1_1869	2.401997	2.401997	F
Prevotellaceae_960	-2.26664	2.266637	F
Marinifilaceae_24613	-2.10466	2.104657	F
Muribaculaceae_24634	1.977435	1.977435	F
Rikenellaceae_967	-1.95549	1.955486	F
Christensenellaceae_1866	-1.83918	1.839176	F
Acidaminococcaceae_2166	1.588362	1.588362	F
Erysipelotrichaceae_2149	-1.30812	1.308122	F
Veillonellaceae_2172	-1.14948	1.149477	F
Bifidobacteriaceae_433	-1.02	1.020003	F
F_Other_1	-0.49907	0.499066	F
Tannerellaceae_24657	-0.36623	0.366227	F

Lachnospiraceae_1987	-0.15444	0.154445	F
Bacteroidaceae_917	-0.09662	0.096618	F
Barnesiellaceae_24597	0.024438	0.024438	F
Burkholderiaceae_26352	0.003822	0.003822	F