**Table S2**: **Group and species-specific 16S rRNA gene-targeted primers and probes.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Target organism*** | ***Primer***  ***and probe*** | | ***Sequence 5’- 3’*** | |
| *All-bacteria* **(\*)** | | F\_Bact 1369 | | CGG TGA ATA CGT TCC CGG | |
|  | | R\_Prok1492 | | TAC GG**C** TAC CTT GTT ACG ACT T | |
|  | | **P\_TM1389F** | | **6FAM-CTT GTA CAC ACC GCC CGT C** | |
| *C. leptum* | | F\_Clept 09 | | CCT TCC GTG CCG SAG TTA | |
|  | | R\_Clept 08 | | GAA TTA AAC CAC ATA CTC CAC TGC TT | |
|  | | **P-Clep 01** | | **6FAM-CAC AAT AAG TAA TCC ACC** | |
| *Bifidobacterium* | | F\_Bifid 09c | | CGG GTGAGT AAT GCG TGA CC | |
|  | | R\_Bifid 06 | | TGA TAG GAC GCG ACC CCA | |
|  | | **P\_Bifid** | | **6FAM-CTC CTG GAA ACG GGT G** | |
| *C. coccoides* | | F\_Ccoc 07 | | GAC GCC GCG TGA AGG A | |
|  | | R\_Ccoc 14 | | AGC CCC AGC CTT TCA CAT C | |
|  | | **P\_Erec482(\*)** | | **VIC-CGG TAC CTG ACT AAG AAG** | |
| *Bacteroides/* | | F\_Bacter 11 | | CCT WCG ATG GAT AGG GGT T | |
| *Prevotella* | | R\_Bacter 08 | | CAC GCT ACT TGG CTG GTT CAG | |
|  | | **P\_Bac303(\*)** | | **VIC-AAG GTC CCC CAC ATT G** | |
| *E. coli* | | E.coli F | | CAT GCC GCG TGT ATG AAG AA | |
|  | | E.coli R | | CGG GTA ACG TCA ATG AGC AAA | |
| *Lactobacillus/* | | F\_Lacto 05 | | AGC AGT AGG GAA TCT TCC A | |
| *Leuconostoc/ Pediococcus* | | R\_Lacto 04 | | CGC CAC TGG TGT TCY TCC ATA TA | |
| *F. prausnitzii* | | Fprau 07 | | CCA TGA ATT GCC TTC AAA ACT GTT | |
|  | | Fprau 02 | | GAG CCT CAG CGT CAG TTG GT | |

(\*) modified from reference

Primers and probes were constructed to target all dominant and subdominant bacterial species in accordance to the pyrosequencing results. Methods have been previously described [26]. Probe sequences are in bold.