**Supplimentary Table 1. Gut microbiota analysis techniques**

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| --- | --- | --- | --- | --- | --- | --- |
| **Author, Year, Country [ref]** | **Gut microbiota assessment method** | **DNA extraction** | **16S rRNA region** | **Sequencing platform** | **Data analysis pipeline** | **Reference database** |
| Arboleya, 2020, Spain \* [31] | NGS | QIAmp DNA stool kit | 16S rRNA-23S rRNA ITS | MiSq-Illumina | QIIME2 | Updated version of bifidobacterial ITS database |
| Cong, 2017, USA [36] | NGS | MoBio Power Soil or PowerMag Soil DNA isolation kit | V4 region | MiSq-Illumina | QIIME | Greengenes |
| Ford, 2019, USA [33] | NGS | PowerSoil DNA isolation kits | V4 region | MiSq-Illumina | QIIME | Silva |
| Gregory, 2016, USA  [19] | NGS | (Kit from MoBio) | V3-V4 region | MiSq-Illumina | QIIME | Greengenes |
| Kumbhare, 2022, Canada [34] | NGS | Zymo Quick DNA Fecal Microbe Miniprep kit | V4 region | MiSq-Illumina | Dada2 | HITdb, V1.0 |
| Morais, 2021, Portugal [37] | NGS | NZI Tissue gDNA Isolation Kit | V3-V4 region | MiSq-Illumina | QIIME | Greengenes |
| Parra-Llorca, 2018, Spain [35] | NGS | MasterPure Complete DNA&RNA Purification Kit | V3-V4 region | MiSq-Illumina | QIIME | Greengenes |
| Pineiro Ramos, 2020, Spain [32] | NGS | MasterPure Complete DNA&RNA Purification Kit | V3-V4 region | MiSq-Illumina | QIIME | Greengenes |

NGS: next generation sequencing; qPCR: quantitative polymerase chain reaction;

\* this study only measured species composition of the genus *Bifidobacterium*