|  |  |  |  |
| --- | --- | --- | --- |
| **Table S1.** Thermal details of measured gene abundances. | | |  |
|  |  |  |  |
| **Target/Primers** | **Sequence(5'-3')** | **Thermal Conditions** | **Reference** |
| **16S rRNA**1 | *Pseudomonas aeruginosa* |  | Lopez-Gutierrez *et al*., 2004 |
| 341f | CCT ACG GGA GGC AGC AG | 95°C / 15 s, 60°C / 30 s, 72°C / 30 s, 75°C / 15 s, 35 cycles |  |
| 534r | ATT ACC GCG GCT GCT GGC A |  |  |
|  |  |  |  |
| **Arch 16S rRNA** | |  | Nicol *et al*., 2005 f |
| rSAf(i)2 | *Methanobacterium sp.* | 94°C / 20 s, 55°C / 60 s, 72°C / 30 s, 5 cycles | Bano *et al*., 2004 r |
| 958r3 |  | 94°C / 20 s, 50°C / 60 s, 72°C / 30 s, 35 cycles |  |
| ***amoA*(AOA)** | *Fosmid clone 54D9* |  |  |
| 19f4 | ATG GTC TGG CTW AGA CG | 94°C / 45 s, 55°C / 45 s, 72°C / 45 s, 40 cycles | Leininger *et al.,* 2006 |
| CrenamoA616r48x5 | GCC ATC CAB CKR TAN GTC CA |  | Schauss *et al*.,2009 |
| ***amoA*(AOB)**6***:*** | *Nitrosomonas sp.* |  |  |
| amoA-1f | GGG GTT TCT ACT GGT GGT | 94°C / 60 s, 58°C / 60 s, 72°C / 60 s, 40 cycles | Rotthauwe *et al*., 1997 |
| amoA-2r | CCC CTC KGS AAA GCC TTC TTC |  |  |
| ***nifH****7* | *Sinorhizobium meliloti* | 95°C / 45 s, 55°C / 45 s, 72°C / 45 s, 40 cycles | Rösch *et al*., 2002 |
| nifHf |  |  |  |
| nifHr |  |  |  |
| ***nir*K**8 | *Sinorhizobium meliloti* |  | Henry *et al*., 2004 |
| nirK876f | ATY GGC GGV CAY GGC GA | 95°C / 15 s, 63° C / 30 s, 72°C / 30 s, 80°C / 30s, 35 cycles |  |
| nirK1040r | GCC TCG ATC AGR TTR TGG TT |  |  |
|  |  |  |  |
| ***nir*S**9 | *Pseudomonas fluorescens* C7R12 |  | Throbäck *et al*., 2004 |
| nirS4Qf | AAC GYS AAG GAR ACS GG | 95°C / 15 s, 63°C / 30 s, 72°C / 30 s, 80°C / 15 s, 35 cycles |  |
| nirS6Qr | GAS TTC GGR TGS GTC TTS AYG AA |  |  |
|  |  |  |  |
| ***nosZ***10 | *Bradyrhizobium japonicum* USDA 110 |  | Henry *et al*., 2006 |
| nosZ2f | CGC RAC GGC AAS AAG GTS MSS GT | 95°C /15 s, 65°C / 30 s, 72°C / 30 s, 6 cycles; 95°C / 15 s, 60°C / 30 s, |  |
| nosZ2r | CAK RTG CAK SGC RTG GCA GAA | 72°C / 30 s, 40 cycles |  |
|  |  |  |  |

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