**Table S9.** NCBI BLAST search results of clones

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| Clone name | NCBI Sequence Match Species | Max Identity（%） |
| BRA1 | *Bradymonadales* sp. YN101 | 99.3 |
| BRA2 | *Lujinxingia litoralis* B210T | 98.0 |
| BRA4 | *Bradymonas sediminis* FA350T | 98.6 |
| BRA5 | *Bradymonas sediminis* FA350T | 98.6 |
| BRA7 | *Lujinxingia litoralis* B210T | 97.3 |
| BRA10 | *Lujinxingia litoralis* B210T | 98.0 |
| BRA13 | *Lujinxingia litoralis* B210T | 97.3 |
| BRA14 | *Lujinxingia litoralis* B210T | 98.6 |
| BRA15 | *Lujinxingia litoralis* B210T | 95.9 |
| BRA16 | *Bradymonas sediminis* FA350T | 98.6 |
| BRA17 | *Bradymonas sediminis* FA350T | 97.3 |
| BRA19 | *Lujinxingia litoralis* B210T | 98.0 |
| BRA20 | *Lujinxingia litoralis* B210T | 98.6 |
| BRA21 | *Bradymonadales* sp. YN101 | 98.6 |
| BRA24 | *Bradymonas sediminis* FA350T | 98.0 |
| BRA25 | *Bradymonadales* sp. YN101 | 100.0 |
| BRA26 | *Bradymonas sediminis* FA350T | 98.0 |
| BRA28 | *Bradymonas sediminis* FA350T | 99.3 |
| BRA29 | *Bradymonas sediminis* FA350T | 98.0 |
| BRA33 | *Lujinxingia litoralis* B210T | 98.0 |
| BRA34 | *Bradymonas sediminis* FA350T | 98.6 |
| BRA40 | *Lujinxingia litoralis* B210T | 98.6 |
| BRA42 | *Bradymonas sediminis* FA350T | 96.6 |
| BRA44 | *Bradymonadales* sp. YN101 | 98.0 |
| BRA45 | *Bradymonas sediminis* FA350T | 97.3 |
| BRA48 | *Lujinxingia litoralis* B210T | 98.0 |
| BRA50 | *Bradymonadales* sp. YN101 | 98.6 |