**Table S3.** Composition of higher termite *fdhF* inventories. Clade affiliations indicated by GS = Gut spirochete group, PRT=Proteobacteria group, AGR=AGR group, UNHT=Unclassified higher termite group.

|  |  |  |
| --- | --- | --- |
| **Source of gut template** | **Phylotype (clade affiliation)** | **Abundance (%) in Library**  |
| *Nasutitermes* sp. Cost003  |  | **3L1 (87clones)** | **3L2 (17 clones)** |
|  | cs3Csec (GS) | 73.6 | 70.6 |
|  | cs3Bsec (GS) | 20.7 | 17.6 |
|  | cs3Isec (GS) | 4.6 | 0.0 |
|  | cs3Psec (GS) | 1.1 | 0.0 |
|  | 3C4cys (UNHT) | 0.0 | 5.9 |
|  | 3D6cys (GS) | 0.0 | 5.9 |
|  |  |  |  |
| *Rhynchotermes* sp. Cost004  |  |  |  |
|  |  | **4L1 (85 clones)** | **4L2 (22 clones)** |
|  | cs4Asec (GS) | 48.2 | 31.8 |
|  | cs4Esec (AGR) | 14.1 | 9.1 |
|  | cs4Bsec (AGR) | 8.2 | 0.0 |
|  | cs4Gsec (AGR) | 7.1 | 31.8 |
|  | cs4Dsec (AGR) | 7.1 | 4.5 |
|  | cs4Msec (AGR) | 4.7 | 4.5 |
|  | cs4Lsec (AGR) | 4.7 | 0.0 |
|  | cs457sec (AGR) | 3.5 | 0.0 |
|  | cs489sec (GS) | 1.2 | 4.5 |
|  | cs4Qsec (AGR) | 1.2 | 0.0 |
|  | 4D7cys (PRT) | 0.0 | 9.1 |
|  | 4G3sec (AGR) | 0.0 | 4.5 |
|  |  |  |  |
|  |  |  |  |
| *Microcerotermes* sp. Cost006  |  |  |  |
|  |  | **6L1 (74 clones)** |  |
|  | cs6\_23sec (GS) | 47.3 |  |
|  | cs6\_31cys (GS) | 32.4 |  |
|  | cs6\_26sec (GS) | 14.9 |  |
|  | cs6\_B1cys (PRT) | 2.7 |  |
|  | cs6\_F3cys (GS) | 1.4 |  |
|  | cs6\_45cys (PRT) | 1.4 |  |
|  |  |  |  |
| *Nasutitermes* *corniger* Cost007 |  |  |  |
|  |  | **7L1 (30 clones)** |  |
|  | cs7F6sec (GS) | 43.3 |  |
|  | cs7E6cys (GS) | 16.7 |  |
|  | 7B7sec (GS) | 13.3 |  |
|  | 7D2sec (UNHT) | 6.7 |  |
|  | 7E2cys (PRT) | 6.7 |  |
|  | 7H1cys (GS) | 6.7 |  |
|  | 7B4sec (GS) | 3.3 |  |
|  | 7G7sec (GS) | 3.3 |  |
|  |  |  |  |
| *Microcerotermes* sp. Cost008 |  |  |  |
|  |  | **8L1 (84 clones)** |  |
|  | cs8Csec (GS) | 42.9 |  |
|  | cs8Asec (GS) | 39.3 |  |
|  | cs8Bcys (GS) | 10.7 |  |
|  | cs8Dcys (GS) | 7.1 |  |
|  |  |  |  |
| *Amitermes* sp. Cost010  |  |  |  |
|  |  | **10L1 (78 clones)** | **10L2 (22 clones)** |
|  | cs10Dsec (GS) | 62.8 | 45.5 |
|  | cs10Asec (GS) | 21.8 | 22.7 |
|  | cs10Gsec (AGR) | 7.7 | 9.1 |
|  | cs10Isec (GS) | 2.6 | 4.5 |
|  | cs10Ksec (AGR) | 2.6 | 0.0 |
|  | cs10Qsec (AGR) | 1.3 | 0.0 |
|  | cs10Vsec (GS) | 1.3 | 0.0 |
|  | 10C7sec (AGR) | 0 | 4.5 |
|  | 10G6sec (UNHT) | 0 | 9.1 |
|  | 10E12bsec (AGR) | 0 | 4.5 |
|  |  |  |  |
| *Amitermes* sp. JT2 |  |  |  |
|  |  | **Jt2L1 (101 clones)** |  |
|  | 2A1sec (GS) | 68.3 |  |
|  | 2D2sec (AGR) | 6.9 |  |
|  | 2B4sec (GS) | 5.9 |  |
|  | 2G3sec (GS) | 8.9 |  |
|  | 2B9sec (GS) | 6.9 |  |
|  | 2E6sec (GS) | 1.0 |  |
|  | 2B12sec (GS) | 1.0 |  |
|  | 2A3sec (AGR) | 1.0 |  |
|  |  |  |  |
| *Gnathamitermes* sp. JT5 |  |  |  |
|  |  | **Jt5L1 (84 clones)** |  |
|  | 5A1sec (GS) | 28.6 |  |
|  | 5C2sec (GS) | 20.2 |  |
|  | 5F1cys (PRT) | 17.9 |  |
|  | 5B11sec (GS) | 11.9 |  |
|  | 5C5sec (AGR) | 8.3 |  |
|  | 5D3sec (GS) | 4.8 |  |
|  | 5A7sec (GS) | 3.6 |  |
|  | 5A2sec (GS) | 2.4 |  |
|  | 5B1sec (GS) | 2.4 |  |
|   |  |  |   |
|  |  |  |  |