

**Table S4. GO attributes enriched among the genes congruent to XopE2 (including the congruent genes)**

| Rank | GO attribute                                  | <i>gas1</i> | <i>bni1</i> | <i>smi1</i> | <i>bem2</i> | <i>bck1</i> | <i>rvs167</i> | <i>spa2</i> | <i>skt5</i> | <i>myo2</i> | <i>chs5</i> | <i>chs3</i> | <i>slt2</i> |
|------|-----------------------------------------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1    | cellular cell wall organization               | +           | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 2    | external encapsulating structure organization | +           | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 3    | cell wall organization                        | +           | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 4    | cellular cell wall organization or biogenesis | +           | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 5    | cell wall organization or biogenesis          | +           | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 6    | site of polarized growth                      |             | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 7    | cell wall chitin metabolic process            |             |             |             |             |             |               |             | +           |             | +           | +           |             |
| 8    | incipient cellular bud site                   |             | +           | +           | +           |             |               | +           | +           | +           |             | +           |             |
| 9    | mating projection tip                         |             | +           | +           | +           | +           | +             | +           |             | +           | +           | +           |             |
| 10   | cell projection part                          |             | +           | +           | +           | +           | +             | +           |             | +           | +           | +           |             |
| 11   | cell wall polysaccharide metabolic process    |             |             |             |             |             |               |             | +           |             | +           | +           |             |
| 12   | ER-nucleus signaling pathway                  | +           |             | +           |             | +           |               | +           | +           |             | +           | +           | +           |
| 13   | aminoglycan metabolic process                 |             |             |             |             |             |               |             | +           |             | +           | +           |             |
| 14   | chitin metabolic process                      |             |             |             |             |             |               |             | +           |             | +           | +           |             |
| 15   | cell wall macromolecule metabolic process     |             |             |             |             |             |               |             | +           |             | +           | +           |             |
| 16   | cellular bud tip                              |             | +           |             | +           |             |               | +           |             | +           |             |             | +           |
| 17   | cellular bud neck                             |             | +           | +           | +           |             |               | +           | +           | +           |             | +           |             |
| 18   | intracellular signaling pathway               | +           |             | +           | +           | +           |               | +           | +           |             | +           | +           | +           |
| 19   | signaling pathway                             | +           |             | +           | +           | +           |               | +           | +           |             | +           | +           | +           |
| 20   | signaling                                     | +           |             | +           | +           | +           |               | +           | +           |             | +           | +           | +           |
| 21   | cellular component organization               | +           | +           | +           | +           | +           | +             | +           | +           | +           | +           | +           | +           |
| 22   | sexual reproduction                           |             | +           |             | +           |             |               | +           | +           | +           | +           |             | +           |
| 23   | actin filament-based process                  |             | +           |             | +           |             | +             | +           |             | +           |             |             |             |
| 24   | reproduction                                  |             | +           |             | +           |             |               | +           | +           | +           | +           |             | +           |

A plus sign marks an association between a GO attribute and a congruent gene.