

Table S1. The primer of *Plasmodiophora brassicae* sugar transporters genes for constructing yeast functional complementation vectors

| Gene name | Forward primer | Reverse primer |
|-----------|--|--|
| PbHxt1 | ATACCCAGCCTCGAATGGCTACCTATCAGGGGATG | GTCCAAAGCTGGATCTCAGGCTGAGGTCGTCGAC |
| PbHxt2 | ATACCCAGCCTCGAATGGCTGTGCTCAGTGCG | GTCCAAAGCTGGATCCTAGCGGGATTTATTCTCTGCATG |
| PbHxt3 | ATACCCAGCCTCGAATGTCTGCCGAGGAGTCGC | GTCCAAAGCTGGATCTTATTTCCACAATTCCTCGATCTGC |
| PbHxt4 | ATACCCAGCCTCGAATGACGGCCTCGTACGGG | GTCCAAAGCTGGATCTCAGGCGACAACGTGCTCG |
| PQ-1 | ATACCCAGCCTCGAATGACGTGCGTCTGTATTCC | GTCCAAAGCTGGATCTCAAACAGCCGAGGAATGC |
| PQ-2 | ATACCCAGCCTCGAATGATGGCGAATGGTCGA | GTCCAAAGCTGGATCCTATTCTGGGGCGCCTTTCA |
| PQ-3 | ATACCCAGCCTCGAATGTCGCCTGTGTCCTGC | GTCCAAAGCTGGATCCTAGTATTGCGACTCCAGGTC |
| PQ-4 | ATACCCAGCCTCGAATGATGCAATGTGTATGCAAGG | GTCCAAAGCTGGATCTCATTGCTTCTCGATGTCCCTCG |
| PQ-5 | ATACCCAGCCTCGAATGGCGTGGTGTGAATGCG | GTCCAAAGCTGGATCTTACTTTGATTGCCGGTACATCC |
| PQ-6 | ATACCCAGCCTCGAATGTCGTGCGACCTGCCG | GTCCAAAGCTGGATCTTATCCCGACGGCATGGG |
| PQ-7 | ATACCCAGCCTCGAATGGGGACCGCTCCGCGC | GTCCAAAGCTGGATCTCAGATGGCGACCGGGAGG |
| PQ-8 | ATACCCAGCCTCGAATGGAGAGAGCACATACGTATGGG | GTCCAAAGCTGGATCTTATACATCGGGTGTATCAGGTGCG |
| PQ-9 | ATACCCAGCCTCGAATGTCGGCCTCGCATGTG | GTCCAAAGCTGGATCTCATGGATGCTTCGGCGC |
| PQ-10 | ATACCCAGCCTCGAAAAGAGGAAAAAATTGTTAGGGGT | GTCCAAAGCTGGATCACTTTCACAAGTATATGCATCATCT |
| PQ-11 | ATACCCAGCCTCGAATGCCTCCGTATAACCGG | GTCCAAAGCTGGATCTCATAGTGTAGGCGAAGGCG |
| PQ-12 | ATACCCAGCCTCGAATGGACGCCGTCGTTGTCG | GTCCAAAGCTGGATCAATGAAATCCTTGTGCGCTAGGC |
| PQ-13 | ATACCCAGCCTCGAATGGACGTGTCGCGCACG | GTCCAAAGCTGGATCCTAGTCCTTCTTCGTGGTCTTTGAC |
| PQ-14 | ATACCCAGCCTCGAATGGGGATCGCTCCGCGC | GTCCAAAGCTGGATCTCAGATGGCGACCGGGAGG |