**Supplementary Table 1** Description of published sequences of *Potato mop-top virus* (PMTV) used in this study

| Isolate | Geographic origin | Source[a] | References[b] | Sequenced region[c] |
|---|---|---|---|---|
| 8 | Latvia | Tuber | 5 | 8K, CP-RT |
| 29 | Latvia | Tuber | 5 | 8K, CP-RT |
| 64 | Latvia | Tuber | 5 | 8K, CP-RT |
| 75 | Latvia | Tuber | 5 | 8K, CP-RT |
| 605 | Finland | Tuber | 5 | 8K, CP-RT |
| 705 | Finland | Tuber | 5 | 8K, CP-RT |
| 805 | Finland | Tuber | 5 | 8K, CP-RT |
| 1605 | Finland | Tuber | 5 | 8K, CP-RT |
| 3205 | Finland | Tuber | 5 | 8K, CP-RT |
| 4205 | Finland | Tuber | 5 | 8K, CP-RT |
| Korneta | Czech Republic | Test plant | 2 | 8K, CP-RT |
| Todd | Scotland | Test plant | 10 | 8K |
| T | Scotland | Test plant | 4 | CP-RT |
| PMTV-Sw | Sweden | Soil | 8, 9 | 8K, CP-RT |
| La Cabana | Colombia | Test plant | 3 | 8K |
| BS4T | Colombia | Tuber | 6 | CP-RT |
| 23T | Colombia | Tuber | 6 | CP-RT |
| 54-10 | Denmark | Soil | 7 | 8K |
| 54-15 | Denmark | Soil | 7 | 8K, RT |
| Nb7 | Thailand | Test plant | Unpubl. | CP |
| ScM 2007-1 | Thailand | Tuber | Unpubl. | CP |
| AUPo6 | Thailand | Test plant | Unpubl. | CP |
| H2 | Canada | Tuber | 11 | CP |
| PMTV-PL | Poland | Tuber | 1 | CP |
| Hiroshima | Japan | Tuber | Unpubl. | 8K, CP-RT |
| Tokachi | Japan | Tuber | Unpubl. | 8K, CP |

[a] Isolates were characterized directly from infected potato tubers. Isolates from the soil were acquired using bait plants. Test plant isolates were generate by mechanical inoculation

[b] 1. Budziszewska et al. (2010) Plant Dis 94:920; 2. Cerovska et al. (2007) Folia Microbiol 52:61-64; 3. Gil et al. (2011) Actualidades Biologicas 33:69-84; 4. Kashiwazaki et al. (1995) Virology 206:701-706; 5. Latvala-Kilby et al. (2009) Phytopathology 99:519-531; 6. Osorio-Giraldo et al. (2013) Agronomia Mesoamericana 24:1-15; 7. Pecenkova et al. (2004) Virus Genes 29:249-255; 8. Savenkov et al. (1999) J Gen Virol 80:2779-2784; 9. Savenkov et al. (2003) J Gen Virol 84:1001-1005; 10. Scott et al. (1994) J Gen Virol 75:3561-3568; 11. Xu et al. (2004) Plant Dis 88:363-367

[c] CP, coat protein gene; RT, read-through domain; 8K, gene for cysteine-rich 8-kDa protein

**Supplementary Table 2** Detection of the PMTV types of RNA-CP and RNA-TGB in potato tubers and soil by sequence analysis

| Isolate | Source | Spraing symptoms | CP gene[a] | RT domain[b] | 8K gene[c] |
|---|---|---|---|---|---|
| Sweden | | | | | |
| PMTV-[SE-K] | Tuber | No | II | II | B |
| PMTV-[SE-W] | Tuber | Yes | I | I | B |
| PMTV-[SE-X] | Tuber | Yes | I | I | B |
| PMTV-[SE-I] | Tuber | No | II | II | B |
| PMTV-[SE-N-1991] | Soil | - | I+ II | I+ II | B |
| PMTV-[SE-N] | Soil | - | II | II | B |
| PMTV-[SE-Z] | Tuber | No | II | II | B |
| PMTV-[SE-F] | Tuber | No | II | II | B |
| PMTV-[SE-H] | Tuber | No | II | II | B |
| PMTV-[SE-G] | Tuber | No | I | I | B |
| PMTV-[SE-T] | Tuber | No | II | II | B |
| PMTV-[SE-E] | Soil | - | II | II | B |
| PMTV-[SE-M] | Soil | - | II | II | B |
| PMTV-[SE-D] | Tuber | No | II | II | B |
| PMTV-[SE-AB] | Tuber | No | II | II | B |
| PMTV-[SE-C] | Tuber | Yes | II | I | A |
| PMTV-[SE-S] | Tuber | Yes | I | I | B |
| PMTV-[SE-Y] | Tuber | Yes | I | I | B |
| PMTV-[SE-U] | Tuber | No | I | I | B |
| PMTV-[SE-O] | Tuber | Yes | II | II | B |
| Denmark | | | | | |
| 54-5 | Soil | - | II | II | B |
| 54-8 | Soil | - | I | I | B |
| 54-10 | Soil | - | II | II | nd |
| 54-11 | Soil | - | I | I | nd |
| 54-12 | Soil | - | II | II | B |
| 54-21 | Soil | - | I | I | A |
| 54-23 | Soil | - | II | II | B |
| 54-24 | Soil | - | II | II | B |
| 54-26 | Soil | - | I | I | B |
| 54-31 | Soil | - | II | II | B |
| 54-35 | Soil | - | II | II | B |
| 54-42 | Soil | - | II | II | B |
| 54-43 | Soil | - | II | II | nd |
| 54-44 | Soil | - | II | II | B |
| USA | | | | | |
| 1 | Tuber | Yes | II | nd | B |
| 2 | Tuber | Yes | II | nd | B |
| 3 | Tuber | Yes | II | nd | B |
| 4 | Tuber | Yes | nd | nd | B |
| 5 | Soil | - | II | nd | B |
| 7 | Tuber | Yes | nd | nd | B |
| 8 | Tuber | Yes | II | nd | B |
| 9 | Tuber | Yes | II | nd | nd |
| 10 | Tuber | Yes | nd | nd | B |

[a] complete CP, coat protein gene (531 nt, nucleotide position 314..844), RNA-CP

[b] partial RT, read-through domain (1617 nt, nucleotide position 1175..2791), RNA-CP

[c] complete 8K, gene for cysteine-rich 8-kDa protein (207 nt, nucleotide position 2462..2668), RNA-TGB; nd, not determined