



Supplementary Materials

| Table S1. Primers used | l in this study. |
|------------------------|------------------|
|------------------------|------------------|

| cDNA cloning of ThHV1 and ThHV1-S ThHV1 ThHV1 ThHV1 GIF TTACCAAGAGCACCAAAT 5389-5406 4143-4160 + GIR CAATGAGCCCAATAACAGG 6130-6147 4884-4901 - G2F AGCATTTACCTTATCGCCATTAACAG 8324-8335 7078-7099 - G3R CGGTCGGTCGGTCGGACAA 9837-59893 8629-8647 - PIF AGTCACTGGGCGTGTGGAAA 9875-9893 8629-8647 - PIF AGTCACTGGGCCTTTCTCAAAAT 5878-5897 4632-4651 + PIR GTCACTGGGCCTTCTCAAAAT 5878-5897 4632-4651 + PIF AGTCACTGGGCCTTCTCAA 5878-5897 4632-4651 + PIF AGTCACTGGGCTTCTCTAA 5878-5897 4632-4651 + PSF AAATGATTGTGAGGTCGTA 3633-3651 2387-2405 + PSF AAATACTCCGCCTGCTGGACA 5975-5976 4711-4730 + P6R GGAAGCATGGCCTGTGTGA 3820-3829 2574-2593 - 70-55P CCAACAGTCTGCCACTGACAA 10269 | Primer name | Sequence (5'→3') | Positio | Polarity ² | | | |
|--|--|--|-----------------|---------------------------|---|--|--|
| GIF TTAGCAAGAGCACCAAAT 5389-5406 4143-1400 + GIR CAATGAGCCAATAACAGG 6130-6147 4884-4901 - G2F AGCATTTAGCACTATACGAG 6130-6147 4884-4901 - G2R TGGGCACAGTTCATTTGCAGAG 8324-8345 7078-7099 - G3R CAGCATTAGCACACGGGAGAA 8837-8653 7391-7407 + G3R ATACGAACACTGGTAGAA 8875-9893 8629-8647 - P1F AGTCGTGGTGTGTGAAAAT 5878-5897 4632-4651 + P1R GTCACTGGCGTTGTGAAAAT 5878-5897 4632-4651 + P5F AAATGATTGTAGAGTCGCTA 6333-631 2887-2405 + P5R ATTCGACGCGCGTTGGAA 5957-5976 4711-4730 + P6R GAACCATCGCCACCGCGAAA 707-726 707-726 - P7F CTGGAATCCCTAGCCCACCTG 3820-3829 2574-2593 - 70-55P CCAACAGTCGCCATTCACACC 2614-2634 1388 - 70-55P CCAACAGTCGCCATTAGACACA 8209-39 | cDNA cl | oning of ThHV1 and ThHV1-S | ThHV1 | ThHV1-S | | | |
| GIR CAATGAGCCAATAACAGG 6130-6147 4884-4901 - G2F AGCATTTAGCTTATCGCCATCA 7667-7688 6421-6442 + G3F CGGTTTGCTGAGAGATAG 8637-8653 7391-7407 + G3R ATACGAACACTGGGTAGAA 9875-9893 8629-8667 - PIF AGCGTGTGGTTCTAAAAT 5878-5897 4632-4651 + PIR GTCACTGGGCTTTTCTCTAA 6374-6393 5218-5147 - P5F AAATGCGTGCGTTGTGA 5676-5591 4330-4345 - P6F AATTCGGCACTGCGCTGTGGA 5957-5976 4711-4730 + P6R GGAAGCATGCCTTGTGGA 707-726 707-726 + P7R ACTGCCATCAGACCACCTTG 3820-3829 2574-2593 - 70-55P CCAACAGTCTGCCATCCAGAA 10269-10285 9023-9039 + 2012-55P GGGGCTGCCCCAGTAAGAA 860-879 - - 70-55P CGAACAGTCCCCTAGTAAGAA 800-879 - - 2012-55P GGGGCGTGCCCCTGATAAGAA 800-879 | G1F | TTAGCAAGAGCACCAAAT | 5389–5406 | 4143-4160 | + | | |
| C2F AGCATTTACGTTATCGCCATCA 7667-7688 6421-6442 + C2R TGGGCACAGTTCATTTGTAGAG 8324-8345 7078-7099 - C3F CGGTTTCCTGGAGAATAG 8837-8653 7391-7407 + G3R ATACGAACACTGGGTAGAA 9875-9893 8629-8647 - P1F AGTCCTGCTGCTTCTAAAAT 5878-5897 4632-4651 + P1F AGTCCGTGGCGTTTCTAAAAT 5878-5897 4632-4651 + P5F AAATGATTGGAGGCTTCTCA 6334-3651 2387-2405 + P5R ATTCGCTGCGCTTGGAA 5576-5591 4330-4345 - P6R GGAACCATGCCTAGGCGACA 5975-5976 4711-4730 + P6R GGAACCACTGCCTAGCCAGAA 707-726 707-726 + P7F CTGGAATCGCTAGCAGCAGCATTCCACC 2614-2634 1388-1388 - 70-5SP CCAACACTCTCCACTAGTAAGA 860-879 800-879 - 2012-5SP GGGGGGACACGCCGATAAGATA 10269-10285 9023-9039 + 110A (adapter) < | G1R | CAATGAGCCAATAACAGG | 6130–6147 | 4884-4901 | - | | |
| G2R TGGGCACAGTTCATTTCTACAG 8324-8345 7078-7099 G3F CGGTTTGCTGGAGATAG 8637-8653 7391-7407 + G3R ATACGAACACTGGGTAGAA 9875-9893 8629-8647 - P1F AGTCGTGCTGGTTCTAAAAT 5878-5897 4632-4651 + P1F AGTCGTGGTGTGTTTCTCTAA 6374-6393 5218-5147 - P5F AAATGATTGGGGCTTTTCTCTAA 6374-6393 5218-5147 - P5R ATTCGGTCGCTTGTGA 3633-3651 2387-2405 + P5R ATTCACTGGCGCTTGTGA 5576-5591 4330-4345 - P6F AATTACCTGCGCTGCGCTGGCACA 5957-5976 4711-4730 + P6R GGAACACATGGCCTGTGTTG 7892-7911 6046-6665 - P7F CTGGAATTGCCAACAGCCCTG 3820-3829 2574-2593 - 70-5SP CCAAACACTCTGCACACAC 2614-2634 1368-1388 - 70-3SP GGGGGTTGCCCAGAAAA 860-879 80-879 - 2012-3SP ATGAACATTTATGAAGACGGACTC | G2F | AGCATTTAGCTTATCGGCATCA | 7667–7688 | 6421-6442 | + | | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | G2R | TGGGCACAGTTCATTTGTAGAG | 8324-8345 | 7078–7099 | - | | |
| G3R ATACGAACACTGGGTAGAA 9875–9893 8629–8647 - P1F AGTCGTGGCTTCTCTAAAAT 5878–5897 4632–4651 + P1F AGTCGTCGGCTTTCTCTAA 6374–6393 5218–5147 - P5F AAATGATTGTGAGGTCGTA 3633–3651 2387–2405 + P5R ATTCCGTCGGCTTGTGA 5576–5591 4310–4345 - P6F AATTACCTGCGCTGTGTGTG 7892–7911 6646–6665 - P7F CTGGAATCGCCAGCACCTTG 3820–3829 2574–2593 - 70-55P CCAACAGTCTGCCATCCAGACA 1028-9012-9039 + 2012-35P GGGGGCTGCCCATGCCAGAAA 10269–10285 9023-9039 + 2012-35P GGGGGCTGCCCAACGCCC 2641–9634 368–879 * 2012-35P ATGAACTTTATGAAGACGGACTC 9641–9663 8395–8417 + 110A (adapter) TATCTTATCGAGCGTTAGCCCCC to 5' and 3'-end of dsRNA +/- RC110A (primer) GGGGGCACACCGCGATAAGATA complementary to the adapter 110A -/+ C1F TTGTTGTTTACCGCCCCT | G3F | CGGTTTGCTGGAGATAG | 8637-8653 | 7391–7407 | + | | |
| P1F AGTCGTGCTGGTTCTAAAAT 5878-5897 4632-4651 + P1R GTCACTGGGCTTTTCTCTAA 6374-6393 5218-5147 - P5F AAATGATTGTGAGGTCGTA 3633-3651 2387-2405 + P5R ATTCCGTCGCTTGTGA 5576-5591 4330-4345 - P6F AATTACCTGCGCGTTGGGACA 5957-5976 4711-4730 + P6R GGAAACATGGCCGTTGTGT 7892-7911 6646-6665 - P7F CTGGAATCGCTAGCCGAGAA 707-726 707-726 + P7R ACTGCCATCAGACCACCTTG 3820-3829 2574-2593 - 70-5SP CCAACAGTCTGCCATGTCACCC 2614-2634 1368-1388 - 70-3SP GGGGGTTGCCCCAGTAAGAA 800-879 860-879 - 2012-3SP ATGAACTTTATGAAGACGGACTC 9641-9663 8395-8417 + 110A (adapter) TATCTTATCGGCGTGTCCCCC to 5' and 3'-end of dsRNA +/- RC110A (primer) GGGGGGACACGCCCCAT 979-998 979-998 + C1F TTGTTGTTTACCCGCCCCC | G3R | ATACGAACACTGGGTAGAA | 9875–9893 | 8629-8647 | - | | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | P1F | AGTCGTGCTGGTTCTAAAAT | 5878-5897 | 4632-4651 | + | | |
| P5F AAATGATTGTGAGGTCGTA 3633-3651 2387-2405 + P5R ATTCGGTCGGTTGTGA 5576-5591 4330-4345 - P6F AATTACCTGCGCTTGTGGACA 5957-5591 4711-4730 + P6R GGAACCATGGCCTGTGTTG 7892-7911 6646-6665 - P7F CTGGAATCGCTAGCCAGCACA 707-726 707-726 + P7R ACTGCCATCAGACCACCTG 3820-3829 2574-2593 - 70-5SP CCAACAGTCTGCCATCAAA 10269-10285 9023-9039 + 2012-5SP GGGGGTTGCCCAGAAA 10269-10285 9023-9039 + 2012-5SP GGGGGAACCGCCGATAAGAA 860-879 860-879 - 2012-3SP ATGAACTTTATGAAGACGGACTC 9641-9663 8395-8417 + 110A (adapter) TATCTATCGGCCGTGTCCCCC to 5' and 3'-end of dsRNA +/- RC110A (primer) GGGGGACACGCCCGATAAGAAT 2885-8604 1339-1358 - C1F TTGTTGTTACCGGCGTGTCCGC 979-998 97-998 + C1R GGCCTCATGTCTGGTCGA | P1R | GTCACTGGGCTTTTCTCTAA | 6374–6393 | 5218-5147 | - | | |
| P5R ATTCGGTCGGTTGTGA 5576-5591 4330-4345 - P6F AATTACCTCGCGTTGGGACA 5957-5976 4711-4730 + P6R GGAAGCATGGCCTGTTGTG 7892-7911 6646-6665 - P7F CTGGAATCGCTAGCCGAGAA 707-726 707-726 + P7R ACTGCCATCAGACCACCTTG 3820-3829 2574-2593 - 70-5SP CCAACAGTCTGCCACGAAA 10269-10285 9023-9039 + 2012-5SP GGGGGTGCCCACGAAAA 10269-10285 9023-9039 + 2012-5SP GGGGGTTGCCCACGACAAA 860-879 - 2012-3SP ATGAACTTTATGAAGACGGACTC 9641-9663 8395-8417 + 110A (adapter) TATCTTATCGGCCGTGTCCCCC to 5' and 3'-end of dsRNA +/- -/+ RC110A (primer) GGGGGACACGCCGATAAGATA complementary to the adapter 110A -/+ -/+ C1F TTGTGTGTTTACCGCCCCCT 979-998 979-998 + - C1R GGCCTCATGTTCTGGTCCAA 2585-2604 1339-1358 - - C2F GAACGAGGGGAACGTGTCAG 1647-1666 / + | P5F | AAATGATTGTGAGGTCGTA | 3633-3651 | 2387-2405 | + | | |
| P6F AATTACCTGCGCTTGGGACA 5957-5976 4711-4730 + P6R CGAACCATGCCCTGTGTGT 7892-7971 6646-6665 - P7F CTGGAATCGCTAGCCGAGAA 707-726 707-726 + P7R ACTGCCATCAGACCACCTTG 3820-3829 2574-2593 - 70-5SP CCAACAGTCTGCCATCACAC 2614-2634 1368-1388 - 70-3SP GGGGGTTGCCCACGAAA 10269-10285 9023-9039 + 2012-3SP ATGAACTTTATCAACACGACGCC 9641-9663 8395-8417 + 100A (adapter) TATCTTATCGACGCGGTGTCCCCC to 5' and 3'-end of dsRNA +/- RC110A (primer) GGGGGACACGCCGATAAGATA complementary to the adapter 110A -/+ To detect the presence of ThHV1 and ThHV1-S ThHV1 ThHV1-S -/+ C1F TTGTGTTTTACCGGCCCCT 979-998 79-998 + C2F GAACGAGGGGAAGGTGTCAG 1647-1666 / + C2R GCGCTTATACCAGGTTTACC 2107-2126 / - C3F GCCCCATATATCGAGGTTAG <td< td=""><td>P5R</td><td>ATTCGGTCGGTTGTGA</td><td>5576-5591</td><td>4330-4345</td><td>_</td></td<> | P5R | ATTCGGTCGGTTGTGA | 5576-5591 | 4330-4345 | _ | | |
| P6R GGAAGCATGGCCTGTTGTTG 7892-7911 6646-6665 P7F CTGGAATCGCTAGCCGAGAA 707-726 707-726 + P7R ACTGCCATCAGACCACCTTG 3820-3829 2574-2593 - 70-5SP CCAACAGTCTGCCATTCCACC 2614-2634 1368-1388 - 70-3SP GGGGGTTGCCCTAGTAAAGA 860-879 860-879 - 2012-3SP ATGAACTTTATGAAGACGGACTC 9641-9663 8395-8417 + 110A (adapter) TATCTTATCGCCGTGTCCCCC to 5' and 3'end of dsRNA +/- RC110A (primer) GGGGGACACGCCGATAAGATA complementary to the adapter 110A -/+ 70 detect the presence of ThHV1 and ThHV1-S ThHV1 ThHV1-S C1F TTGTTGTTTTACCCGCCCCT 979-998 979-998 + C1R GGCCTCATGTTCGGTCGAA 2585-2604 1339-1358 - C2F GAACGAGGGAAGGTGTAG 1647-1666 / + C3F GCCTCATTATACCGAGGTTAACCC 2107-2126 / - C3R CAGTATTCACGAGTGTAGTT 157 | P6F | AATTACCTGCGCTTGGGACA | 5957–5976 | 4711-4730 | + | | |
| P7F CTGGAATCGCTAGCCGAGAA 707-726 707-726 + P7R ACTGCCATCAGACCACCTTG 3820-3829 2574-2593 - 70-5SP CCAACAGTCTGCCATCACCC 2614-2634 1368-1388 - 70-3SP GCGGGTTGCCACGAAA 100285 9023-9039 + 2012-3SP ATGAACTTTATGAAGACGGACTC 9641-9663 8395-8417 + 110A (adapter) TATCTTATCGGCGTGTCCCCC to 5' and 3'-end of dsRNA +/- RC110A (primer) GGGGGACACGCCGATAAGATA complementary to the adapter 110A -/+ To detect the presence of ThHV1 and ThHV1-S ThHV1 ThHV1 ThHV1-S C1F TTGTTGTTTTACCGGCCCCT 979-998 979-998 + C2F GAACGAGGGAAGGTGTCAG 1339-1358 - C2F GAACGAGGGGAAGGTGTCAG 1647-1666 / + C3R CAGTATTACGAGGTGTCAGT 10507-10526 9261-9280 + C3R CAGTATTCGAGGTGTAGTT 11094-11112 9693-9711 - TML-F GGTATGACGGTGAAGTGT 1570-1587 / + TML-F GGTATGACGGTGAAGTGT 1070 | P6R | GGAAGCATGGCCTGTTGTTG | 7892–7911 | 6646-6665 | _ | | |
| P7R ACTGCCATCAGACCACCTTG $3820-3829$ $2574-2593$ - 70-5SP CCAACAGTCTGCCATTCCACC $2614-2634$ $1368-1388$ - 70-3SP GGGGCTGCCCAGGAAA $10269-10285$ $9023-9039$ + 2012-5SP GGGGGTGCCCAGTAAAGA $860-879$ $860-879$ - 2012-3SP ATGAACTTTATGAAGACGGACTC $9641-9663$ $8395-8417$ + 110A (adapter) TATCTTATCGACGCGTGTCCCCC to 5' and 3'-end of dsRNA +/- RC110A (primer) GGGGGACACGCCGATAAGATA complementary to the adapter 110A -/+ To detect the presence of ThHV1 and ThHV1-S ThHV1 ThHV1-S -/+ C1F TTGTTGTTTACCGGCCCCT $979-998$ $979-998$ + C1R GGCCTCATGGTCTGGTCAG $1647-1666$ / + C2F GAACGAGGGAAGGTGTCAG $1647-1666$ / + C3R CAGTATTCGAGGGAAGGTGTTAG $10507-10526$ $9261-9280$ + C3R CAGTATTCGCAGGGAAGGTGT $1094-11112$ $9693-9711$ - TML-F GGGGAAGGGCGAAGGAGTGT $1770-1727$ / - | P7F | CTGGAATCGCTAGCCGAGAA | 707-726 | 707–726 | + | | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | P7R | ACTGCCATCAGACCACCTTG | 3820-3829 | 2574-2593 | _ | | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 70-5SP | CCAACAGTCTGCCATTCCACC | 2614-2634 | 1368–1388 | _ | | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 70-3SP | GGGGCTGTGCCACGAAA | 10269-10285 | 9023–9039 | + | | |
| $\begin{array}{cccc} 2012-3SP & ATGAACTTTATGAAGACGGACTC & 9641-9663 & 8395-8417 & + \\ 110A (adapter) & TATCTTATCGGCGTGTCCCCC & to 5' and 3'-end of dsRNA & +/-\\ COMPLEMENTATION (primer) & GGGGGACACGCCGATAAGATA & Complementary to the adapter 110A & -/+ \\ \hline C110A (primer) & GGGGGACACGCCGATAAGATA & Complementary to the adapter 110A & -/+ \\ \hline C110A (primer) & TTGTTGTTTTACCGGCCCT & 979-998 & 979-998 & + \\ \hline C11R & GGCCTCATGTTCTGGTCGAA & 2585-2604 & 1339-1358 & - \\ C2F & GAACGAGGGAAGGTGTCAG & 1647-1666 & / & + \\ \hline C2R & GCGCTTGTGACCATTAACCC & 2107-2126 & / & - \\ \hline C3F & GCCTCATTATCGAGGTTAG & 10507-10526 & 9261-9280 & + \\ \hline C3R & CAGTATTCGCAGTGCTGT & 11094-11112 & 9693-9711 & - \\ \hline For semi-quantitative PCR detection of ThHV1 and ThHV1-S & \\ \hline TML-F & GGTATGACGGTGAAGTGT & 1570-1587 & / & + \\ \hline TML-R & ATCAAGAGGGAAGACCC & 2471-2488 & 1225-1242 & - \\ \hline TMS-F & ACCAAACAGGGAAGGACG & 1073-1090 & 1073-1090 & + \\ \hline TMS-R & CTTGTGGCATAACGAACC & 2471-2488 & 1225-1242 & - \\ \hline TMLS-F & ACCAAACAGGGAAGACC & 2471-2488 & 1225-1242 & - \\ \hline TMLS-F & ACCAAACAGGGAAGACC & 2471-2488 & 1225-1242 & - \\ \hline TMLS-F & ACCAAACAGGGAAGACC & 2471-2488 & 1225-1242 & - \\ \hline TMLS-F & ACCAAAGTATCCCACCAG & 8559-8576 & 7310-7327 & - \\ \hline Tubulin-F & CCAAGTATTCCCACCAG & 8559-8576 & 7310-7327 & - \\ \hline Tubulin-F & CCAAGTATCCCACCAG & 8559-8576 & 7310-7327 & - \\ \hline Tubulin-F & CCAAGTATCCCACCAG & 8559-8576 & 7310-7327 & - \\ \hline Tubulin-F & CCAAGTATCCCACCAG & 8559-8576 & 7310-7327 & - \\ \hline Tubulin-F & CCAAGTATCCCACCAG & 8123-8441 & 7174-7192 & + \\ \hline TMLS-R & CTCAAAGTATCCCACCAG & 8123-8441 & 7174-7192 & + \\ \hline TMLS-R & CTCAAAGTATCCCACCAG & 8123-8441 & 7174-7192 & + \\ \hline TMLS-R & CTCAAAGTATCCCACCAG & 8123-8441 & 7174-7192 & + \\ \hline TMLS-R & CTCAAAGTATCCCACCAG & 8123-8441 & 7174-7192 & + \\ \hline TUbulin-F & CCAAGTCTTGTCCTGCCA & / & / & + \\ \hline TUbulin-F & CCAAGTCTTGTCCTGCCA & / & / & + \\ \hline TUbulin-R & CAATCTCACGCATGATGGCT & / & / & - \\ \hline TO test cDNA inserts in the pMD18-T vector & \\ \hline M13F-47 & CGCCAGGGTTTTCCCAGTCACGAC & pMD18-T vector \\ \hline M13R-48 & AGCGGATAACAATTTCACACAGGA & pMD18-T vector \\$ | 2012-5SP | GGGGGTTGCCCTAGTAAAGA | 860-879 | 860-879 | _ | | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 2012-3SP | ATGAACTTTATGAAGACGGACTC | 9641-9663 | 8395-8417 | + | | |
| RC110A (primer)GGGGGACACGCCGATAAGATAcomplementary to the adapter 110A-/+To detect the presence of ThHV1 and ThHV1-SThHV1ThHV1ThHV1-SC1FTTGTTGTTTTACCCGCCCCT979-998979-998+C1RGGCCTCATGTTCTGGTCGAA2585-26041339-1358-C2FGAACGAGGGGAAGGTGTCAG1647-1666/+C3FGCCTCATTATCGAGGTTAG10507-105269261-9280+C3RCAGTATTCGCAGTGCTGTT11094-11129693-9711-C3RCAGTATTCGCAGTGACGTGT1570-1587/+TML-FGGTATGACGGTGAAGTGT1570-1587/+TML-FACCAAACAGGGAAGGACC AAT1710-1727/-TML-RATCAAGAGGAGACCCAAT1770-170901073-1090+TMS-FACCAAACAGGGAAGGACG1073-10901073-1090+TMS-FACCGTAAACTATATCAGCA8423-84417174-7192+TMLS-FACCGTAAAGTATCCCACCAG8559-85767310-7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//+Tubulin-RCAATCTCACGCATGATGGCT//+To test cDNA inserts in the pMD18-T vector///-M13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorMD18-T vector | 110A (adapter) | TATCTTATCGGCGTGTCCCCC | to 5' and 3'-en | to 5' and 3'-end of dsRNA | | | |
| KCHOA (pinnler)GGGGGACACCCCGATIAAGATAadapter 110A-//To detect the presence of ThHV1 and ThHV1-SThHV1ThHV1ThHV1-SC1FTTGTTGTTTTACCCGCCCCT979-998979-998+C1RGGCCTCATGTTCTGGTCGAA2585-26041339-1358-C2FGAACGAGGGGGAAGGTGTCAG1647-1666/+C2RGCGCTCATTGTGACCATTAACCC2107-2126/-C3FGCCTCATTATCGAGGTTTAG10507-105269261-9280+C3RCAGTATTCGCAGTGCTGTT11094-111129693-9711-For semi-quantitative PCR detection of ThHV1 and ThHV1-STML-FGGTATGACGGTGAAGTGT1570-1587/+TML-RATCAAGAGGGAGACCCAAT1710-1727/-TMS-FACCAAACAGGGAAGGACG1073-10901073-1090+TMS-FACCAAACAGGGAAGGACC2471-24881225-1242-TMLS-FACCGTAAGTTTATTCAGCA8423-84417174-7192+TMLS-RCTCAAAGTATCCCACCAG8559-85767310-7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//+Tubulin-RCAATCTCACGCATGATGGCCT//-To test cDNA inserts in the pMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | PC110A (primor) | RC110A (primer) CCCCCACACCCCCATAACATA complementary to the | | | | | |
| To detect the presence of ThHV1 and ThHV1-S ThHV1 ThHV1-S C1F TTGTTGTTTACCCGCCCCT 979–998 979–998 + C1R GGCCTCATGTTCTGGTCGAA 2585–2604 1339–1358 - C2F GAACGAGGGGAAGGTGTCAG 1647–1666 / + C2R GCGCTTGTGACCATTAACCC 2107–2126 / - C3F GCCTCATTATCGAGGTTAG 10507–10526 9261–9280 + C3R CAGTATTCGCAGTGCTGTT 11094–11112 9693–9711 - For semi-quantitative PCR detection of ThHV1 and ThHV1-S TML-F GGTATGACGGTGAAGTGT 1570–1587 / + TML-F GGTATGACGGTGAAGGACCCAAT 1710–1727 / - - TML-R ATCAAGAGGGAAGGACC 1073–1090 1073–1090 + - TMS-F ACCGAAACAGGGAAGGACC 2471–2488 1225–1242 - - TMLS-F ACCGTAAGTTTATCAGCA 8423–8441 7174–7192 + - TMLS-R CTCAAAGTATCCCACCAG 8559–8576 7310–7327 <td< td=""><td colspan="2"></td><td>adapter</td><td><i>_/</i> '</td></td<> | | | adapter | <i>_/</i> ' | | | |
| C1F TTGTTGTTTTACCCGCCCT 979-998 979-998 + C1R GGCCTCATGTTCTGGTCGAA 2585-2604 1339-1358 - C2F GAACGAGGGGAAGGTGTCAG 1647-1666 / + C2R GCGCTTGTGACCATTAACCC 2107-2126 / - C3F GCCTCATTATCGAGGTTAG 10507-10526 9261-9280 + C3R CAGTATTCGCAGTGCTGTT 11094-1112 9693-9711 - For semi-quantitative PCR detection of ThHV1 and ThHV1-S - - - TML-F GGTATGACGGTGAAGTGT 1570-1587 / + TML-R ATCAAGAGGAGACCCAAT 1710-1727 / - TMS-F ACCAAACAGGGAAGGACCAAT 1710-1727 / - TMS-F ACCAAACAGGGAAGCCAAT 1710-1727 / - TMS-F ACCAAACAGGGAAGCCAAT 1710-1727 / - TMS-F ACCAAACAGGGAAGCC 2471-2488 1225-1242 - TMLS-F ACCGTAAGTTTATCAGCA 8423-8441 7174-7192 + <td>To detect the</td> <td>e presence of ThHV1 and ThHV1-S</td> <td>ThHV1</td> <td>ThHV1-S</td> <td></td> | To detect the | e presence of ThHV1 and ThHV1-S | ThHV1 | ThHV1-S | | | |
| C1R GGCCTCATGTTCTGGTCGAA 2585–2604 1339–1358 - C2F GAACGAGGGGAAGGTGTCAG 1647–1666 / + C2R GCGCTTGTGACCATTAACCC 2107–2126 / - C3F GCCTCATTATCGAGGTTTAG 10507–10526 9261–9280 + C3R CAGTATTCGCAGTGCTGTT 11094–11112 9693–9711 - For semi-quantitative PCR detection of ThHV1 and ThHV1-S TML-F GGTATGACGGTGAAGTGT 1570–1587 / + TML-R ATCAAGAGGAGACCCAAT 1710–1727 / - TMS-F ACCAAACAGGGAAGGACC 1073–1090 1073–1090 + TMS-R CTTGTGGCATAACGAACC 2471–2488 1225–1242 - TMLS-F ACCGTAAGTTATCCCACCAG 8423–8441 7174–7192 + TMLS-R CTCAAAGTATCCCACCAG 8559–8576 7310–7327 - Tubulin-F CCAAGCTCTTGTCCTGCCA / / + Tubulin-R CAATCTCACGCATGATGGCT / / - T | C1F | TTGTTGTTTTACCCGCCCCT | 979–998 | 979–998 | + | | |
| C2FGAACGAGGGGAAGGTGTCAG1647–1666/+C2RGCGCTTGTGACCATTAACCC2107–2126/-C3FGCCTCATTATCGAGGTTTAG10507–105269261–9280+C3RCAGTATTCGCAGTGCTGTT11094–111129693–9711-For semi-quantitative PCR detection of ThHV1 and ThHV1-STML-FGGTATGACGGTGAAGTGT1570–1587/+TML-RATCAAGAGGAGAGCCCAAT1710–1727/-TMS-FACCAAACAGGGAAGGAGC1073–10901073–1090+TMS-RCTTGTGGCATAACGAACC2471–24881225–1242-TMLS-FACCGTAAGTTTATTCAGCA8423–84417174–7192+TMLS-RCTCAAAGTATCCCACCAG8559–85767310–7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//-To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTCCACACAGGApMD18-T vector | C1R | GGCCTCATGTTCTGGTCGAA | 2585-2604 | 1339–1358 | _ | | |
| C2RGCGCTTGTGACCATTAACCC2107–2126/-C3FGCCTCATTATCGAGGTTTAG10507–105269261–9280+C3RCAGTATTCGCAGTGCTGTT11094–111129693–9711-For semi-quantitative PCR detection of ThHV1 and ThHV1-STML-FGGTATGACGGTGAAGTGT1570–1587/+TML-RATCAAGAGGAGACCCAAT1710–1727/-TMS-FACCAAACAGGGAAGGACG1073–10901073–1090+TMS-RCTTGTGGCATAACGAACC2471–24881225–1242-TMLS-FACCGTAAGTTTATTCAGCA8423–84417174–7192+TMLS-RCTCAAAGTATCCCACCAG8559–85767310–7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//+T0 test cDNA inserts in the pMD18-T vectorMD18-T vectorMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector- | C2F | GAACGAGGGGAAGGTGTCAG | 1647–1666 | / | + | | |
| C3F GCCTCATTATCGAGGTTTAG 10507-10526 9261-9280 + C3R CAGTATTCGCAGTGCTGTT 11094-11112 9693-9711 - For semi-quantitative PCR detection of ThHV1 and ThHV1-S - - - TML-F GGTATGACGGTGAAGTGT 1570-1587 / + TML-R ATCAAGAGGAGACCCAAT 1710-1727 / - TMS-F ACCAAACAGGGAAGGACG 1073-1090 1073-1090 + TMS-F ACCAAACAGGGAAGGACC 2471-2488 1225-1242 - TMLS-F ACCGTAAGTTTATTCAGCA 8423-8441 7174-7192 + TMLS-R CTCAAAGTATCCCACCAG 8559-8576 7310-7327 - Tubulin-F CCAAGCTCTTGTCCTGCCA / / + Tubulin-R CAATCTCACGCATGATGGCT / / - M13F-47 CGCCAGGGTTTTCCCAGTCACGAC pMD18-T vector - M13R-48 AGCGGATAACAATTTCACACAGGA pMD18-T vector | C2R | GCGCTTGTGACCATTAACCC | 2107-2126 | / | - | | |
| C3RCAGTATTCGCAGTGCTGTT11094–111129693–9711–For semi-quantitative PCR detection of ThHV1 and ThHV1-STML-FGGTATGACGGTGAAGTGT1570–1587/+TML-RATCAAGAGGAGAGCCCAAT1710–1727/–TMS-FACCAAACAGGGAAGGACG1073–10901073–1090+TMS-RCTTGTGGCATAACGAACC2471–24881225–1242–TMLS-FACCGTAAGTTTATTCAGCA8423–84417174–7192+TMLS-RCTCCAAAGTATCCCACCAG8559–85767310–7327–Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//–To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | C3F | GCCTCATTATCGAGGTTTAG | 10507-10526 | 9261-9280 | + | | |
| For semi-quantitative PCR detection of ThHV1 and ThHV1-STML-FGGTATGACGGTGAAGTGT1570–1587/+TML-RATCAAGAGGAGACCCAAT1710–1727/-TMS-FACCAAACAGGGAAGGACG1073–10901073–1090+TMS-RCTTGTGGCATAACGAACC2471–24881225–1242-TMLS-FACCGTAAGTTTATTCAGCA8423–84417174–7192+TMLS-RCTCAAAGTATCCCACCAG8559–85767310–7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT/To test cDNA inserts in the pMD18-T vectorToToM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | C3R | CAGTATTCGCAGTGCTGTT | 11094–11112 | 9693–9711 | - | | |
| TML-F GGTATGACGGTGAAGTGT 1570–1587 / + TML-R ATCAAGAGGAGACCCAAT 1710–1727 / - TMS-F ACCAAACAGGGAAGGACG 1073–1090 1073–1090 + TMS-R CTTGTGGCATAACGAACC 2471–2488 1225–1242 - TMLS-F ACCGTAAGTTTATTCAGCA 8423–8441 7174–7192 + TMLS-R CTCAAAGTATCCCACCAG 8559–8576 7310–7327 - Tubulin-F CCAAGCTCTTGTCCTGCCA / / + Tubulin-R CAATCTCACGCATGATGGCT / / - M13F-47 CGCCAGGGTTTTCCCAGTCACGAC pMD18-T vector - M13R-48 AGCGGATAACAATTTCACACAGGA pMD18-T vector - | | For semi-quantitative PCR detection of T | ThHV1 and ThHV | /1-S | | | |
| TML-R ATCAAGAGGAGACCCAAT 1710–1727 / – TMS-F ACCAAACAGGGAAGGACG 1073–1090 1073–1090 + TMS-R CTTGTGGCATAACGAACC 2471–2488 1225–1242 – TMLS-F ACCGTAAGTTTATTCAGCA 8423–8441 7174–7192 + TMLS-R CTCAAAGTATCCCACCAG 8559–8576 7310–7327 – Tubulin-F CCAAGCTCTTGTCCTGCCA / / + Tubulin-R CAATCTCACGCATGATGGCT / / + To test cDNA inserts in the pMD18-T vector To test cDNA inserts in the pMD18-T vector + M13F-47 CGCCAGGGTTTTCCCAGTCACGAC pMD18-T vector + M13R-48 AGCGGATAACAATTTCACACAGGA pMD18-T vector - | TML-F | GGTATGACGGTGAAGTGT | 1570-1587 | / | + | | |
| TMS-F ACCAAACAGGGAAGGACG 1073–1090 1073–1090 + TMS-R CTTGTGGCATAACGAACC 2471–2488 1225–1242 - TMLS-F ACCGTAAGTTTATTCAGCA 8423–8441 7174–7192 + TMLS-R CTCAAAGTATCCCACCAG 8559–8576 7310–7327 - Tubulin-F CCAAGCTCTTGTCCTGCCA / / + Tubulin-R CAATCTCACGCATGATGGCT / / - To test cDNA inserts in the pMD18-T vector Totest cDNA pMD18-T vector M13F-47 CGCCAGGGTTTTCCCAGTCACGAC pMD18-T vector - | TML-R | ATCAAGAGGAGACCCAAT | 1710-1727 | / | - | | |
| TMS-RCTTGTGGCATAACGAACC2471–24881225–1242–TMLS-FACCGTAAGTTTATTCAGCA8423–84417174–7192+TMLS-RCTCAAAGTATCCCACCAG8559–85767310–7327–Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//–To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | TMS-F | ACCAAACAGGGAAGGACG | 1073-1090 | 1073-1090 | + | | |
| TMLS-FACCGTAAGTTTATTCAGCA8423-84417174-7192+TMLS-RCTCAAAGTATCCCACCAG8559-85767310-7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//-To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector- | TMS-R | CTTGTGGCATAACGAACC | 2471-2488 | 1225-1242 | - | | |
| TMLS-RCTCAAAGTATCCCACCAG8559-85767310-7327-Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//-To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | TMLS-F | ACCGTAAGTTTATTCAGCA | 8423-8441 | 7174–7192 | + | | |
| Tubulin-FCCAAGCTCTTGTCCTGCCA//+Tubulin-RCAATCTCACGCATGATGGCT//-To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | TMLS-R | CTCAAAGTATCCCACCAG | 8559-8576 | 7310–7327 | _ | | |
| Tubulin-RCAATCTCACGCATGATGGCT//-To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | Tubulin-F | CCAAGCTCTTGTCCTGCCA | / | / | + | | |
| To test cDNA inserts in the pMD18-T vectorM13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | Tubulin-R | CAATCTCACGCATGATGGCT | / | / | _ | | |
| M13F-47CGCCAGGGTTTTCCCAGTCACGACpMD18-T vectorM13R-48AGCGGATAACAATTTCACACAGGApMD18-T vector | To test cDNA inserts in the pMD18-T vector | | | | | | |
| M13R-48 AGCGGATAACAATTTCACACAGGA pMD18-T vector | M13F-47 | M13F-47 CGCCAGGGTTTTCCCAGTCACGAC pMD18-T vector | | | | | |
| | M13R-48 | AGCGGATAACAATTTCACACAGGA | pN | /ID18-T vector | | | |

¹ Positions of oligonucleotides for primers or the adapter in the cDNA of ThHV1/T-70 and ThHV1-S/T-70D were labeled in Figure S1 of this paper. ² Polarity refers to positive strand (+) and negative strand (–) of dsRNA.

| | Genus | Virus | | Amino Acid Identities (%) | | | | | |
|-------------|----------------|--------------------------------------|-----------------|---------------------------|-------|-------|-------|-------|---------------|
| Family | | | Acronym | ORF2 Full | UGT | PPPDE | RdRp | Hel | Accession NO. |
| Hypoviridae | Betahypovirus | Sclerotinia sclerotiorum hypovirus 1 | SsHV1/SZ150 | 45.98 | 53.10 | 68.18 | 76.17 | 58.40 | JF781304 |
| | | Phomopsis Longicolla hypovirus 1 | PlHV1/ME711 | 50.43 | 58.69 | 67.29 | 75.00 | 59.22 | KF537784 |
| | | Cryphonectria hypovirus 3 | CHV3/GH2 | 55.74 | 57.55 | 66.97 | 73.83 | 60.39 | NP-051710.1 |
| | | Botrytis cinerea hypovirus 1 | BcHV1/HBTom-372 | 55.31 | 54.90 | 64.42 | 74.61 | 59.06 | MG554632 |
| | | Cryphonectria hypovirus 4 | CHV4/SR2 | 47.86 | 55.88 | 67.59 | 71.48 | 59.51 | YP-138519.1 |
| | | Valsa ceratosperma hypovirus 1 | VcHV1/MVC86 | 54.71 | 56.94 | 67.59 | 71.76 | 60.47 | KF537784 |
| | Alphahypovirus | Cryphonectria hypovirus 1 | CHV1/EP713 | 8.22 | - | - | 24.05 | 14.56 | NP041092.1 |
| | | Cryphonectria hypovirus 2 | CHV2/NB58 | 9.04 | - | - | 23.90 | 18.75 | NP613266.1 |
| | | Sclerotinia sclerotiorum hypovirus 2 | SsHV2/SX247 | 8.00 | - | - | 20.21 | 18.40 | AIA61616.1 |
| | | Sclerotinia sclerotiorum hypovirus 2 | SsHV2/5472 | 7.54 | - | - | 20.21 | 13.43 | AHA56680.1 |
| | | Fusarium graminearum hypovirus 1 | FgHV1/HN10 | 7.91 | - | - | 27.06 | 23.16 | AGC75065.1 |
| | | Fusarium graminearum hypovirus 2 | FgHV2/JS16 | 7.27 | - | - | 11.20 | 19.90 | AKB94065.1 |
| Potyviridae | Potyvirus | Plum pox virus | PPV | 7.88 | - | - | 13.56 | 14.05 | NP-040807 |

 $\label{eq:second} \textbf{Table S2.} Sequence identities between ThHV1 and other hypoviruses.$

| Isolate | Source | Location | Species | ThHV1+1 | ThHV1- S+ |
|------------|--------------------------|-----------------------|--|---------|--------------|
| T-9 | Soil | Enshi, Hubei | Trichoderma hamatum | - | - |
| T-13 | Soil | Enshi, Hubei | Trichoderma atroviride | - | - |
| T-18 | Soil | Enshi, Hubei | Trichoderma hamatum | - | - |
| T-19 | Soil | Enshi, Hubei | Trichoderma hamatum | - | - |
| T-21 | Soil | Wuhan, Hubei | Trichoderma harzianum | - | - |
| T-26 | Soil | Wuhan, Hubei | Trichoderma atroviride | - | - |
| T-31 | Soil | Wuhan, Hubei | Trichoderma album | - | - |
| T-32 | Soil | Wuhan, Hubei | Trichoderma album | - | - |
| T-33 | Soil | Wuhan, Hubei | Trichoderma koningiopsis | - | - |
| T-34 | Soil | Wuhan, Hubei | Trichoderma koningionsis | - | - |
| T-35 | Soil | Wuhan, Hubei | Trichoderma koningiopsis | + | - |
| T-37 | Soil | Wuhan, Hubei | Trichoderma koningiopsis | + | - |
| T-38 | Soil | Wuhan Hubei | Trichoderma atroviride | + | _ |
| T_/1 | Soil | Wuhan Hubei | Trichoderma harzianum | + | |
| T-49 | Soil | Wuhan, Hubei | Trichoderma | - | - |
| T-50 | Soil | Wuhan Hubei | Trichoderma nolusnorum | _ | _ |
| T-52 | Soil | Wuhan Hubei | Trichoderma polysporum Trichoderma polysporum | _ | _ |
| T-57 | Soil | Hanchuan, Hubei | Trichoderma | - | _ |
| | | | koningiopsis Tuichedeuree | | |
| T-69 | Soil | Ezhou, Hubei | brevicompactum | - | - |
| JST-1 | soil | Nanjing, Jiangsu | Trichoderma sp. | - | - |
| JST-2 | soil | Nanjing, Jiangsu | Trichoderma sp. | - | - |
| JST-3 | soil | Nanjing, Jiangsu | Trichoderma sp. | - | - |
| JST-4 | soil | Nanjing, Jiangsu | Trichoderma sp. | - | - |
| JST-10 | soil | Hangzhou, Zhejiang | Trichoderma sp. | - | - |
| JST-11 | soil | Hangzhou, Zhejiang | Trichoderma sp. | - | - |
| JST-12 | soil | Hangzhou, Zhejiang | Trichoderma sp. | + | - |
| JST-14 | soil | Hangzhou, Zhejiang | Trichoderma sp. | - | - |
| YN8-2 | Straw of oilseed rape | Xinyang, Henan | Trichoderma sp. | + | - |
| YN8-4 | Straw of oilseed rape | Xinyang, Henan | Trichoderma sp. | - | - |
| YN8- 49 | Straw of oilseed rape | Xinyang, Henan | Trichoderma sp. | - | - |
| 3-1-221 | Straw of oilseed | Zhangzhou, Fuijan | Trichoderma sp. | - | - |

Table S3. The presence of Trichoderma harzianum hypovirus 1 (ThHV1) and ThHV1-S in the population of *Trichoderma* spp. in China.

| JN8M- | Straw of oilseed | Jinvian Jiangyi | Trichodorma co | | - |
|--------|------------------|------------------|----------------------|---|---|
| 2 | rape | Jinxian, Jiangxi | Trichouermu sp. | - | |
| JN8M- | Straw of oilseed | Jinvian Jiangyi | Trichodorma | | |
| 4 | rape | Jinxian, Jiangxi | Trichouermu sp. | - | - |
| JN8M- | Straw of oilseed | Jinvian Jiangyi | Trichodorma sp | | - |
| 8 | rape | Jinxian, Jiangxi | 171011000er 1110 sp. | - | |
| JN8M- | Straw of oilseed | Jinvian Jiangyi | Trichodorma | | - |
| 9 | rape | Jinxian, Jiangxi | Trichouermu sp. | - | |
| EN8-72 | Straw of oilseed | Hubai | Trichodorma | | |
| | rape | Tubel | Trichouerniu sp. | - | - |

1 "+" represents the presence of ThHV1 or ThHV1-S through the detection of RT-PCR with primer pairs listed in Table S1.



Figure S1. A schematic diagram showing the strategy used for full-length cDNA cloning of Trichoderma harzianum hypovirus 1 (ThHV1) and ThHV1-S. The location of PCR primers and the 5' and 3'-adaptor used in the cDNA cloning are indicated.



Figure S2. Two possible H-type pseudoknots upstream the overlap region of Trichoderma harzianum hypovirus 1 (ThHV1), and possibly responsible for the +1 frameshift of ThHV1 during the expression of ORF 2 encoded polypeptide. (**A**) A predicted RNA pseudoknot structure is located preceding the start site of ORF2. (**B**) Another predicted RNA pseudoknot structure is located preceding the stop site of ORF1. Dashed lines indicate base pairs predicted to form the stems in the pseudoknots.



Figure S3. Conformation of the deleted region (I and II) of Trichoderma harzianum hypovirus 1 (ThHV1)-S in comparison with ThHV1 using RT-PCR. (**A**) Schematic diagram showing the deleted regions of ThHV1-S compared with ThHV1. Two dashed line frames indicate the two deleted regions on the genome of ThHV1, and the positions of primers used for RT-PCR detection are indicated as red arrowheads. (**B**) The RT-PCR detection of deleted region I on the genomes of both ThHV1 and ThHV1-S with primer pairs of C1F/C1R and C2F/C2R. C. The RT-PCR detection of deleted region II on the genomes of both ThHV1 and ThHV1-S with primer pair of C3F/C3R.



Figure S4. The antifungal ability assay of isolates T-70 and T-70D. (**A**) Mycelial growth of *Botrytis cinerea* on the PDA plate amended with 10% (v/v) cultural filtrate of isolate T-70, T-70D, or water (CK). (**B**) The pH value of the cultural filtrate for each isolate. (**C**) Mycelial dry weight of T-70 and T-70D after cultured in potato dextrose broth shake-incubated at 150 rpm on 25 °C for 7 days. (**D**) Inhibition percentage of *B. cinerea* growth rate on the PDA plate amended with10% (v/v) cultural filtrate of T-70 or T-70D. "*" and "**" indicate significant difference according to the Student t test at p < 0.05 and p < 0.01 (n = 9), respectively.



Figure S5. RT-PCR detection of presence of Trichoderma harzianum hypovirus 1 (ThHV1) and ThHV1-S in ten randomly selected single-conidium progeny isolates of T-70D with primer pairs C1F/C1R and C2F/C2R.



Figure S6. Detection of Trichoderma harzianum hypovirus 1 (ThHV1) and ThHV1-S in *Trichoderma* isolates T-68 and T-51 as well as their derivative strains using RT-PCR.



Figure S7. The antifungal ability assay of *Trichoderma* isolates T-68 and T-51 as well as their derivative strains. (**A**) Mycelial growth of *B. cinerea* on the PDA plate amended with 10% (v/v) cultural filtrate of each isolate/strain or water (CK). (**B**) The pH value of the cultural filtrate for each isolate/strain. (**C**) Mycelial dry weight of each isolate/strain after cultured in potato dextrose broth shake-incubated at 150 rpm on 25 °C for 7 days. (**D**). Inhibition percentage of *B. cinerea* growth rate on the PDA plate amended with 10% (v/v) cultural filtrate of each isolate/strain. Bars in graph **A**, **B** and **C** labeled with the same letters are not significantly different (p > 0.05) according to Least Significant Difference Test (n = 9).



Figure S8. Antifungal ability of cultural filtrate of different *Trichoderma* isolates on tomato leaves against the infection of *B. cinerea*. Bars labeled with the same letters are not significantly different (p < 0.05) according to Least Significant Difference Test (n = 9).



Figure S9. (**A**) Colony morphology and mycoparasitism ability of *Trichoderma koningiopsis* isolate T-51 and two derivative strains, 51-70-2 and 51-70-4, carrying Trichoderma harzianum hypovirus 1 (ThHV1) alone. The dashed lines indicate the regions of *B. cinerea* colonies colonized by *T. koningiopsis* in the three dual cultures. (**B**) RT-PCR detection the present of ThHV1 with primer pair C2F/C2R in isolates T-51 and T-70, and their derivative strains. Note that the 500-bp DNA band, indicating the presence of ThHV1, was detected in isolate T-70 and two derivative strains 51-70-2 and 51-70-4.