# Identification and characterization of a QTL for growth of *Fusarium circinatum* on pine-based medium

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## Supplementary File S2

**The sequence of the primers used to confirm the absence or presence of genes and regions targeted in this study.**

| Primer name | Primer sequence (5' to 3') | Target gene | Target region |
|---|---|---|---|
| $P_{73F}$ | ACTCCCCAACTGACTCATGG | g13407 | 1 194 142 - 1 195 143 |
| $P_{73R}$ | CCACTCGCTTCCAAACACAA | | |
| $P_{74F}$ | CAGTTGGCACTAGTCCTCCA | g13408 | 1 198 252 - 1 198 921 |
| $P_{74R}$ | TCAGGATCGATACCAAGGGC | | |
| $P_{4F}$ | TTGCCCTCTCCAGTACCAAG | FSP34 indel | 1 119 532 - 1 127 164 |
| $P_{5R}$ | TGTCTTTGGTTCACACGCTG | | |
| $KS17_F$ | GATGACAAACCGGCTCACTC | g13276 | 1 206 036 - 1 208 265 |
| $KS17_R$ | CAGCCATGAGACGGTAAAGC | | |
| $FSP34_F$ | CATGGACGCGTCAAGTACTG | g13376 | 1 165 752 - 1 168 139 |
| $FSP34_R$ | TGCTTGCAGGTTCAAAGGTC | | |
| $FT_F$ | GGTGGTGCTAAGGACTCACT | g13420 | 1 238 853 - 1 242 201 |
| $FT_R$ | GGTGCTCGCTTTCCAATAGG | | |

**Cycling conditions using the KAPA *Taq* PCR kit (Kapa Biosystems) – these conditions were mainly used for the genes g13407 and g13408**

| Step | Temperature | Time | Cycles |
|---|---|---|---|
| Initial Denaturation | 95 °C | 3 min | 1 |
| Denaturation | 95 °C | 30 seconds | 30 |
| Annealing | variable * | 30 seconds | |
| Extension | 72 °C | 1 min per kb | |
| Final Extension | 72 °C | 5 minutes | 1 |
| Hold | 4 °C | ∞ | |

*Annealing temperature for primer set $P_{73F+R}$ = 57 °C primer set $P_{74F+R}$ = 56 °C

| **Cycling conditions using the LongAmp® *Taq* 2X Master Mix (New England BioLabs) – these conditions were mainly used for the indel in *F. circinatum* FSP34** | | | |
|---|---|---|---|
| **Step** | **Temperature** | **Time** | **Cycles** |
| Initial Denaturation | 94 °C | 30 seconds | 1 |
| Denaturation | 94 °C | 30 seconds | |
| Annealing | 55 °C | 1 minute | 10 |
| Extension | 65 °C | 8 minutes | |
| Denaturation | 94 °C | 30 seconds | |
| Annealing | 55 °C | 1 minute | 20 |
| Extension | 65 °C | 8 minutes + 20 sec each cycle | |
| Final Extension | 65 °C | 10 minutes | 1 |
| Hold | 4 °C | ∞ | |

| **LongAmp® *Taq* 2X Master Mix (New England BioLabs) protocol to amplify three different genes* in CMWF350 (FSP34), CMWF389, and CMWF674 (KS17).** | | | |
|---|---|---|---|
| **Step** | **Temperature** | **Time** | **Cycles** |
| Initial Denaturation | 94 °C | 30 seconds | 1 |
| Denaturation | 94 °C | 30 seconds | |
| Annealing | 52 °C | 30 seconds | 30 |
| Extension | 65 °C | 2 minutes 30 seconds | |
| Final Extension | 65 °C | 10 minutes | 1 |
| Hold | 4 °C | ∞ | |

*Primer set $FSP34_{F+R}$, $KS17_{F+R}$, and $FT_{F+R}$ were used to amplify the different genes in *F. circinatum* (FSP34 and KS17) and *F. temperatum* (CMWF389).