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| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  | **Infected** |  | **Control** |
|  |  |  |  |  |  |  |  |  |
| **Gene** | **Tissue and cells** | **Ramet A 5mm d3**  | **Ramet A 10mm d3**  | **Ramet B 5mm d3**  | **Ramet B 10mm d3**  |  | **Ramet A site1 d35**  | **Ramet A site2 d35**  |
| CHI4 | Primary phloem | 3.03 | **-** | 0.86 | 1.38 |  | 0.00 | 0.01 |
| Sec. phloem conducting | 19.52 | 1.32 | 6.78 | 1.74 |  | 0.00 | 0.04 |
| Sec. phloem non-conducting | 49.84 | 1.76 | 2.45 | 0.60 |  | 0.00 | 0.00 |
| Cambium | 5.21 | 1.03 | 0.41 | **-** |  | 0.20 | 0.02 |
| Ray cells | 51.66 | 3.87 | 4.36 | 0.49 |  | 0.00 | 0.00 |
| PP cells | 29.79 | 3.64 | 2.35 | 0.30 |  | 0.00 | 3.71 |
| PAL | Primary phloem | 3.72 | **-** | 2.23 | 1.68 |  | 0.02 | 0.05 |
| Sec. phloem conducting | 2.44 | 1.89 | 4.34 | 0.81 |  | 0.14 | 0.14 |
| Sec. phloem non-conducting | 7.42 | 2.07 | 3.20 | 0.87 |  | 0.03 | 0.02 |
| Cambium | 6.09 | 1.09 | 2.62 | **-** |  | 0.08 | 0.05 |
| Ray cells | 8.21 | 4.85 | 4.27 | 1.89 |  | 0.00 | 0.00 |
| PP cells | 3.65 | 6.42 | 1.60 | 2.33 |  | 0.00 | 0.38 |
| SPI1 | Primary phloem | 0.81 | **-** | 0.00 | 0.00 |  | 0.00 | 0.00 |
| Sec. phloem conducting | 0.37 | 2.54 | 0.00 | 0.80 |  | 1.32 | 0.42 |
| Sec. phloem non-conducting | 0.41 | 2.18 | 0.53 | 0.11 |  | 2.48 | 0.31 |
| Cambium | 0.36 | 4.31 | 4.13 | **-** |  | 0.00 | 0.00 |
| Ray cells | 3.96 | 5.74 | 2.29 | 5.35 |  | 0.00 | 0.00 |
| PP cells | 0.46 | 0.47 | 0.34 | 1.34 |  | 0.00 | 0.00 |
| PX3 | Primary phloem | 0.07 | **-** | 0.10 | 0.05 |  | 0.00 | 0.01 |
| Sec. phloem conducting | 0.24 | 0.12 | 1.22 | 0.83 |  | 0.00 | 0.00 |
| Sec. phloem non-conducting | 0.33 | 0.39 | 0.53 | 0.16 |  | 0.00 | 0.00 |
| Cambium | 0.37 | 0.43 | 13.73 | **-** |  | 0.94 | 0.00 |
| Ray cells | 1.90 | 0.38 | 11.07 | 1.03 |  | 0.00 | 0.00 |
| PP cells | 0.06 | 0.00 | 0.18 | 0.11 |  | 0.00 | 0.00 |
| TIF | Primary phloem | 1.59 | **-** | 0.90 | 0.71 |  | 0.76 | 0.48 |
| Sec. phloem conducting | 0.99 | 1.17 | 0.81 | 0.59 |  | 3.11 | 0.70 |
| Sec. phloem non-conducting | 2.18 | 1.32 | 0.68 | 0.62 |  | 0.94 | 0.60 |
| Cambium | 1.28 | 1.10 | 2.59 | **-** |  | 2.84 | 1.13 |
| Ray cells | 3.28 | 1.75 | 2.65 | 1.82 |  | 0.69 | 1.03 |
| PP cells | 2.20 | 0.83 | 0.67 | 1.55 |  | 0.00 | 0.00 |
| Ramet = trees of Norway spruce clone number 471; d = day; mm = distance from inoculation site |

**Table 2 Expression profiles of five genes in different tissue regions and cell types of Norway spruce phloem, after inoculation with *Ceratocystis polonica* and in control.** Gene expression was determined in sections taken 5 and 10 mm above the inoculation site in ramet A and B of clone 471. Data are presented as relative transcript abundance normalized to actin expression. Dash (-), indicates that the sample was not subjected to target gene profiling due to low RNA yield (cycle threshold value for actin above 35).