**Table S1:** Collection of young leaf samples from wild and cultivated *T. cuspidata.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Identifier** | **Admin. Region** | **Altitude (m.a.s.l.)** | **Tree Height (m)** | **DBH (cm)** | **Location** | |
| **Latitude (N)** | **Longitude (E)** |
| W1 | Dandong, Liaoning Province | 113 | 4.2 | 10.8 | 39°44′53″ | 123°23′22″ |
| W2 | Wang Qing, Jilin Province | 879 | 5.7 | 15.4 | 43°47′44″ | 129°48′33″ |
| C1 | Dandong, Liaoning Province | 169 | shrub | 4.9 | 40°16′26″ | 124°24′42″ |
| C2 | Dandong, Liaoning Province | 372 | shrub | 12.7 | 40°43′39″ | 125°34′20″ |
| C3 | Baishan, Jilin Province | 326 | 3.5 | 8.6 | 43°06′36″ | 126°30′06″ |

**Table S2:** The primer of defense-related genes for PCR amplification in *T. cuspidate*.

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene** | **Description** | **Primer Sequence (5′–3′)** | **Gene ID** |
| *DXR* | 1-deoxy-D-xylulose 5-phosphate reductoisomerase | **F:**TTTCTGTCCGCAATGAGTC  **R:**ATGTTGGGCAACCTCTACC | KI387\_002164 |
| *GGPPS1* | Heterodimeric geranylgeranyl pyrophosphate synthase large subunit 1 | **F:**GCAGTGGGACTCGCTTACC  **R:**GGCTTTGTCGGCCCTTTT | KI387\_010989 |
| *TS* | Taxadiene synthase | **F:**ATTATCATGGCGATCTGTGG  **R:**GGACTTATTGCTCCCTCTTC | KI387\_028801 |
| *T5αH* | Taxadiene 5-alpha hydroxylase | **F:**GCCTCCTATGACACCACC  **R:**TGATTTCTTCGCCCTCCT | KI387\_028803 |
| *TAT* | Taxane 13-alpha-hydroxylase | **F:**ATAGGTATCTTCGTGCTGG  **R:**ATCATCGTGCTTGTCTGC | KI387\_028565 |
| *T10βH* | Taxane 10β-Hydroxylase | **F:**GTTGGCATTATTCTTGTG  **R:**GAACTGAATCGTCTCCC | KI387\_010542 |
| *DBAT* | 10-Deacetylbaccatin III-10-O-Acetyltransferase | **F:**GGGAGCTTGAATTGGAGTGC  **R:**AGGAGCCGTTGAAATGATGG | KI387\_030977 |
| *DBTNBT* | 3'-N-debenzoyl-2'-deoxytaxol N-benzoyltransferase | **F:**TCTTGGGAGATTTGGATG  **R:**CTGAGGTTGGTAATAGCG | KI387\_025350 |
| *2αHB* | 2-alpha-hydroxytaxane 2-O-benzoyltransferase | **F:**GGCGGCTCAGAAATAAG  **R:**GTGGTCATCCAAATCCC | KI387\_003225 |
| *T7βH* | Taxane 7β-Hydroxylase | **F:**ACTCAGGATTAGCGTCTAG  **R:**TTTGTGAAGTGGTGGTGT | KI387\_028597 |
| *18S* | 18S rRNA | **F:**CCGCGGTAATTCCAGCTCCAA  **R:**GAGGGCCAGTGCACACCGAGTA | Internal Reference gene |