

Article

# Transcriptome-Wide Identification of WRKY Transcription Factors and Their Expression Profiles under Different Types of Biological and Abiotic Stress in *Pinus massoniana* Lamb

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Supplementary Materials

**Table S1.** Primer pairs for quantitative polymerase chain reaction.

Gene ID	Primer5'→3'
<i>PmWRKY3</i>	F: TACAAGGCAGTGAGAAAGAG
	R: AGGTGGAGGCAGGAAATTAG
<i>PmWRKY7</i>	F: TCTGATAATCTCTTCTCGCT
	R: GTTCCTGTTCTCGTCGTCCT
<i>PmWRKY13</i>	F: CACAATCATCCCAAACCTCA
	R: GAACCATCCACATTCCTTCC
<i>PmWRKY15</i>	F: ACAAAAAGGTGGGAGTAAGG
	R: AAATGTGCTAGTAGCGGAGG
<i>PmWRKY17</i>	F: CACAGACACAATATCCCACA
	R: TTCACATCACA ACTAGACGA
<i>PmWRKY30</i>	F: TGCTCTGCCCTCATTCTCCC
	R: AAATCGCCTTTTCTTCTGCACT

**Table S2.** Subcellular localization prediction of *PmWRKY* proteins.

SeqID	PSORT	CELLO (reliable-index > 1)	Same result
<i>PmWRKY1</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY2</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY3</i>	nucl: 13, vacu: 1	Nuclear	Nuclear

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<i>PmWRKY4</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY5</i>	nucl: 10.5, cyto_nucl: 6, mito: 1, plas: 1, cysk: 1	Nuclear	Nuclear
<i>PmWRKY6</i>	nucl: 11, chlo: 1, cyto: 1, plas: 1	Nuclear	Nuclear
<i>PmWRKY7</i>	nucl: 12.5, cyto_nucl: 7.5, cyto: 1.5	Nuclear	Nuclear
<i>PmWRKY8</i>	nucl: 13, cyto: 1	Nuclear	Nuclear
<i>PmWRKY9</i>	nucl: 13, chlo: 1	Nuclear	Nuclear
<i>PmWRKY10</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY11</i>	nucl: 8, chlo: 4, cyto: 1, mito: 1	Nuclear	Nuclear
<i>PmWRKY12</i>	nucl: 12.5, cyto_nucl: 7, chlo: 1	Nuclear	Nuclear
<i>PmWRKY13</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY14</i>	nucl: 10.5, cyto_nucl: 6, mito: 1, plas: 1, cysk: 1	Nuclear	Nuclear
<i>PmWRKY15</i>	cyto: 7, nucl: 3, mito: 2, chlo: 1, extr: 1	Nuclear	Nuclear Cytoplasmic
<i>PmWRKY16</i>	nucl: 7, chlo: 3, mito: 3, extr: 1	Nuclear	Nuclear
<i>PmWRKY17</i>	nucl: 11, chlo: 1, extr: 1, vacu: 1	Nuclear	Nuclear
<i>PmWRKY18</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY19</i>	nucl: 12, cyto: 1, cysk: 1	Nuclear	Nuclear
<i>PmWRKY20</i>	chlo: 9, nucl: 5	Nuclear	Nuclear
<i>PmWRKY21</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY22</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY23</i>	nucl: 10.5, cyto_nucl: 6.5, chlo: 2, cyto: 1.5	Nuclear	Nuclear
<i>PmWRKY24</i>	nucl: 14	Nuclear	Nuclear

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<i>PmWRKY25</i>	nucl: 14	Nuclear	Nuclear
<i>PmWRKY26</i>	nucl: 12, chlo: 1, plas: 1	Nuclear	Nuclear
<i>PmWRKY27</i>	nucl: 13, chlo: 1	Nuclear	Nuclear
<i>PmWRKY28</i>	nucl: 12.5, cyto_nucl: 7.5, cyto: 1.5	Nuclear	Nuclear
<i>PmWRKY29</i>	nucl: 13, cyto: 1	Nuclear	Nuclear
<i>PmWRKY30</i>	nucl: 10, cyto: 3, chlo: 1	Nuclear	Nuclear
<i>PmWRKY31</i>	nucl: 13, cyto: 1	Nuclear	Nuclear

**Table S3.** Homologous genes in *Arabidopsis thaliana*.

Gene	Orthologs	Treatment	Reference
<i>PmWRKY3</i>	<i>AtWRKY30</i>	heat stress, drought, jasmonic acid	[1,2]
<i>PmWRKY7</i>	<i>AtWRKY55</i>	SA	[3]
<i>PmWRKY13</i>	<i>AtWRKY44</i>	drought	[4]
<i>PmWRKY15</i>	<i>AtWRKY21</i> , <i>AtWRKY39</i>	osmotic stress, heat stress	[5,6]
<i>PmWRKY17</i>	<i>AtWRKY13</i>	cadmium tolerance	[7]
<i>PmWRKY30</i>	<i>AtWRKY6</i> , <i>AtWRKY42</i> , <i>AtWRKY47</i>	ABA, SA, selenium H <sub>2</sub> O <sub>2</sub> , tolerance	[8,9,10]

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