

# 1 Supplementary Material

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**Table S1.** Primers used for PCR of *PpIAA* ORFs

| Gene ID        | Transcript name   | Forward primer (5'-3')    | Reverse primer (5'-3')    |
|----------------|-------------------|---------------------------|---------------------------|
| <i>PpIAA1</i>  | <i>ppa011843m</i> | ATGGAAGGGTCAGTGAAATATGAGA | TCTCATATTTCACTGACCCTTCCAT |
| <i>PpIAA5</i>  | <i>ppa011935m</i> | ATGGCCAAAGAAGGTTTAG       | TTATTTAGGATCATCTTCATAGTT  |
| <i>PpIAA9</i>  | <i>ppa006744m</i> | ATGTCACCACCGCTGCTTGGTG    | GTTCTGTTCCTGCACCTCTCCATG  |
| <i>PpIAA11</i> | <i>ppa008953m</i> | ATGGAGGGTGTTTGGGTAGTG     | TATCGGCTGGCATCTTTGC       |
| <i>PpIAA13</i> | <i>ppa010871m</i> | ATGGAGCTTCAACTGGGTC       | ATCACTCTTCTTAACCAATTTG    |
| <i>PpIAA14</i> | <i>ppa010342m</i> | ATGGGGTTTGAAGAGACGGAG     | GCTTCTGTTCTGCATTCTCC      |

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**Table S2.** Primers used for qRT-PCR of *PpIAA* gene family members

| Gene ID         | Transcript name   | Forward primer (5'-3')   | Reverse primer (5'-3')   |
|-----------------|-------------------|--------------------------|--------------------------|
| <i>PpIAA1</i>   | <i>ppa011843m</i> | GATCACACAGATGCCCCCTCC    | GCTCCATCGACGCTTACTTTCA   |
| <i>PpIAA2</i>   | <i>ppa018535m</i> | CAAAGGCTACCCAGAACTCCTAA  | CATCTCCAACCAGCATCCAGTCA  |
| <i>PpIAA3</i>   | <i>ppa011755m</i> | AGCTGCCAAAAGATGTGACCAA   | CACATAAATCCCACAACCCTCC   |
| <i>PpIAA5</i>   | <i>ppa011935m</i> | AAAGCGAAACGAAGAACCAAG    | GCTCCATCCATGCTAACCTTGAC  |
| <i>PpIAA7</i>   | <i>ppa010698m</i> | GCCAAGATGTCAGTTTCCTTACC  | CATCCAATCGCCATCCTTATCCTC |
| <i>PpIAA8</i>   | <i>ppa007194m</i> | CACTGTTTCCTTTGCTTCCGTC   | ACTTTTCACCTCCGAGTATCCA   |
| <i>PpIAA9</i>   | <i>ppa006744m</i> | GTATGCCACAATAGCTCGGAA    | GAAGCCCAAGTCTAAGGTCTGT   |
| <i>PpIAA11</i>  | <i>ppa008953m</i> | TATAATGGCAGGAGCAACTAGAC  | CACAGTACCAAGAAACATCCC    |
| <i>PpIAA12</i>  | <i>ppa009545m</i> | TGCTTCTTCTGCTGTGCTGT     | CCCGTCTTCCTTGTCATCTTC    |
| <i>PpIAA13</i>  | <i>ppa010871m</i> | CTTCAACTGGGTCTCGCTCT     | TGGTCAAAGCTGCGTTTCTTGT   |
| <i>PpIAA14</i>  | <i>ppa010342m</i> | CTCTCTGATGCCCTAGCCAAAA   | CCAACCAGCATCCAATCACC     |
| <i>PpIAA15</i>  | <i>ppa010303m</i> | AGCCTTAGACCAAATGTTCCC    | TCCAGTCCCCATCCTTGCTTTC   |
| <i>PpIAA16</i>  | <i>ppa009254m</i> | GCTCCTTCACCATCGGTAAC     | CCCACAAGCATCCAATCTCC     |
| <i>PpIAA17</i>  | <i>ppa011570m</i> | TTCTCCTTCTTGACCATCCGTAAT | TCCTACAAGCATCCAATCCCCA   |
| <i>PpIAA18</i>  | <i>ppa007663m</i> | GTGACAGCTATGAAAACCTCTCC  | ACATCCCCAACAAGCATCCT     |
| <i>PpIAA20</i>  | <i>ppa011821m</i> | CTGGCTCATCATCTTCTCTCTC   | GCCAGTTTATCAGTGCTTCCTCC  |
| <i>PpIAA26</i>  | <i>ppa013361m</i> | GAAACTCTCCCTTGCCATAGAT   | GAGCAGAGTATATTCCCCATTGCC |
| <i>PpIAA27</i>  | <i>ppa007893m</i> | TCTTCCTCTGCCCTCTCCACA    | AGAGACCCCAATTCCAAGTCC    |
| <i>PpIAA27'</i> | <i>ppa009134m</i> | AGGCACAGGTTGTAGGAT       | TTCAGCACCATTTAGGAG       |
| <i>PpIAA29</i>  | <i>ppa010683m</i> | ATTGGGTCTTTCTCTGGCTCTTC  | TGTGCTTTCCAAACCCAAACC    |
| <i>PpIAA30</i>  | <i>ppa020369m</i> | ACAACGCCATCATCATCTTCCC   | AATCCGACGATGACCCCT       |
| <i>PpIAA32</i>  | <i>ppa023002m</i> | GCAGCCTGAAACTTACCATCC    | CTTTGAACTCCCTCTGCCTCT    |
| <i>PpIAA33</i>  | <i>ppa018956m</i> | GGACAAGACTCCCTGAAA       | GCTACCATCCACGAACAT       |
| <i>PpTEF-2</i>  | <i>ppa001368m</i> | GTTGCCTTGGTCGGTCTGA      | ATGAACAGCAACACGCACAA     |

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**Table S3** Analysis of amino acid sequence homology of PpIAA family members in peach.

|          | PpIA<br>A1 | PpIA<br>A2 | PpIA<br>A3 | PpIA<br>A5 | PpIA<br>A7 | PpIA<br>A8 | PpIA<br>A9 | PpIA<br>A11 | PpIA<br>A12 | PpIA<br>A13 | PpIA<br>A14 | PpIA<br>A15 | PpIA<br>A16 | PpIA<br>A17 | PpIA<br>A18 | PpIA<br>A20 | PpIA<br>A26 | PpIA<br>A27 | PpIA<br>A27' | PpIA<br>A29 | PpIA<br>A30 | PpIA<br>A32 | PpIA<br>A33 |
|----------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| PpIAA1   | -          |            |            |            |            |            |            |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA2   | 0.353      | -          |            |            |            |            |            |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA3   | 0.429      | 0.392      | -          |            |            |            |            |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA5   | 0.600      | 0.590      | 0.626      | -          |            |            |            |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA7   | 0.503      | 0.514      | 0.573      | 0.610      | -          |            |            |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA8   | 0.595      | 0.560      | 0.642      | 0.644      | 0.589      | -          |            |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA9   | 0.575      | 0.598      | 0.658      | 0.623      | 0.593      | 0.377      | -          |             |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA11  | 0.728      | 0.720      | 0.752      | 0.768      | 0.746      | 0.769      | 0.765      | -           |             |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA12  | 0.726      | 0.725      | 0.739      | 0.721      | 0.733      | 0.768      | 0.778      | 0.555       | -           |             |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA13  | 0.785      | 0.784      | 0.792      | 0.789      | 0.777      | 0.808      | 0.816      | 0.792       | 0.785       | -           |             |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA14  | 0.547      | 0.545      | 0.615      | 0.653      | 0.359      | 0.545      | 0.571      | 0.745       | 0.753       | 0.788       | -           |             |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA15  | 0.643      | 0.634      | 0.673      | 0.659      | 0.603      | 0.676      | 0.671      | 0.784       | 0.775       | 0.806       | 0.590       | -           |             |             |             |             |             |             |              |             |             |             |             |
| PpIAA16  | 0.519      | 0.558      | 0.602      | 0.630      | 0.437      | 0.653      | 0.660      | 0.791       | 0.758       | 0.788       | 0.390       | 0.623       | -           |             |             |             |             |             |              |             |             |             |             |
| PpIAA17  | 0.559      | 0.596      | 0.583      | 0.613      | 0.503      | 0.569      | 0.555      | 0.716       | 0.688       | 0.763       | 0.550       | 0.581       | 0.521       | -           |             |             |             |             |              |             |             |             |             |
| PpIAA18  | 0.750      | 0.733      | 0.782      | 0.768      | 0.790      | 0.806      | 0.827      | 0.795       | 0.791       | 0.806       | 0.776       | 0.795       | 0.805       | 0.750       | -           |             |             |             |              |             |             |             |             |
| PpIAA20  | 0.774      | 0.747      | 0.763      | 0.756      | 0.779      | 0.777      | 0.750      | 0.679       | 0.722       | 0.749       | 0.781       | 0.749       | 0.790       | 0.744       | 0.772       | -           |             |             |              |             |             |             |             |
| PpIAA26  | 0.653      | 0.672      | 0.672      | 0.702      | 0.693      | 0.730      | 0.709      | 0.690       | 0.709       | 0.714       | 0.699       | 0.730       | 0.695       | 0.682       | 0.481       | 0.680       | -           |             |              |             |             |             |             |
| PpIAA27  | 0.569      | 0.555      | 0.643      | 0.667      | 0.633      | 0.564      | 0.564      | 0.756       | 0.797       | 0.822       | 0.598       | 0.676       | 0.684       | 0.594       | 0.809       | 0.770       | 0.739       | -           |              |             |             |             |             |
| PpIAA27' | 0.559      | 0.556      | 0.652      | 0.664      | 0.625      | 0.525      | 0.549      | 0.770       | 0.792       | 0.812       | 0.589       | 0.700       | 0.674       | 0.606       | 0.795       | 0.773       | 0.728       | 0.287       | -            |             |             |             |             |
| PpIAA29  | 0.775      | 0.777      | 0.833      | 0.785      | 0.781      | 0.763      | 0.750      | 0.803       | 0.787       | 0.564       | 0.779       | 0.801       | 0.781       | 0.751       | 0.799       | 0.757       | 0.744       | 0.802       | 0.734        | -           |             |             |             |
| PpIAA30  | 0.733      | 0.744      | 0.712      | 0.755      | 0.762      | 0.751      | 0.780      | 0.741       | 0.730       | 0.787       | 0.770       | 0.763       | 0.785       | 0.750       | 0.792       | 0.587       | 0.736       | 0.765       | 0.736        | 0.799       | -           |             |             |
| PpIAA32  | 0.739      | 0.756      | 0.778      | 0.765      | 0.757      | 0.777      | 0.751      | 0.711       | 0.704       | 0.777       | 0.777       | 0.779       | 0.758       | 0.758       | 0.794       | 0.791       | 0.752       | 0.749       | 0.744        | 0.765       | 0.783       | -           |             |
| PpIAA33  | 0.774      | 0.807      | 0.792      | 0.783      | 0.775      | 0.824      | 0.804      | 0.790       | 0.780       | 0.770       | 0.781       | 0.768       | 0.767       | 0.824       | 0.779       | 0.775       | 0.804       | 0.819       | 0.771        | 0.792       | 0.784       | 0.827       | -           |

\* Calculation model: p-distance.

The table shows the percent homology of the amino acid sequences of members of the PpIAA family in peach. Members of this family generally display 50%-80% sequence conservation in peach. The maximum similarity observed was between PpIAA3 and PpIAA29(83.3%), and the minimum similarity observed was between PpIAA27 and PpIAA27'(28%)

