

Table S4. Segmental duplicated gene pairs of *GmSnRK2s* genes

| Duplicated gene pairs | | <i>Ka</i> | <i>Ks</i> | <i>Ka/Ks</i> | Time(MYA) |
|-----------------------|-------------------|-------------|-------------|--------------|-----------|
| <i>GmSnRK2.19</i> | <i>GmSnRK2.21</i> | 0.073144495 | 0.603619293 | 0.121177 | 46.43225 |
| <i>GmSnRK2.19</i> | <i>GmSnRK2.20</i> | 0.002383792 | 0.0755075 | 0.03157 | 5.808269 |
| <i>GmSnRK2.19</i> | <i>GmSnRK2.22</i> | 0.069934678 | 0.550542238 | 0.127029 | 42.3494 |
| <i>GmSnRK2.7</i> | <i>GmSnRK2.8</i> | 0.016690536 | 0.079112406 | 0.210972 | 6.08557 |
| <i>GmSnRK2.1</i> | <i>GmSnRK2.3</i> | 0.033996588 | 0.380283676 | 0.089398 | 29.25259 |
| <i>GmSnRK2.1</i> | <i>GmSnRK2.2</i> | 0.002491438 | 0.100492152 | 0.024792 | 7.730166 |
| <i>GmSnRK2.1</i> | <i>GmSnRK2.4</i> | 0.03431148 | 0.393136061 | 0.087276 | 30.24124 |
| <i>GmSnRK2.3</i> | <i>GmSnRK2.2</i> | 0.035679304 | 0.402383359 | 0.08867 | 30.95257 |
| <i>GmSnRK2.9</i> | <i>GmSnRK2.10</i> | 0.011393526 | 0.08684389 | 0.131195 | 6.680299 |
| <i>GmSnRK2.3</i> | <i>GmSnRK2.4</i> | 0.006137514 | 0.071376259 | 0.085988 | 5.490481 |
| <i>GmSnRK2.11</i> | <i>GmSnRK2.14</i> | 0.123880319 | 0.508638231 | 0.243553 | 39.12602 |
| <i>GmSnRK2.21</i> | <i>GmSnRK2.20</i> | 0.073098563 | 0.586938029 | 0.124542 | 45.14908 |
| <i>GmSnRK2.21</i> | <i>GmSnRK2.22</i> | 0.005976723 | 0.116959236 | 0.051101 | 8.996864 |
| <i>GmSnRK2.2</i> | <i>GmSnRK2.4</i> | 0.037304469 | 0.393687819 | 0.094756 | 30.28368 |
| <i>GmSnRK2.16</i> | <i>GmSnRK2.18</i> | 0.033542491 | 0.422144377 | 0.079457 | 32.47264 |
| <i>GmSnRK2.20</i> | <i>GmSnRK2.22</i> | 0.069890809 | 0.534942919 | 0.130651 | 41.14946 |

MYA, million years ago