

**Additional File 4** Survey of WRKY genes from ESTs or their assembled gene indices for 19 plants and the phylogenetic classification of the genes

| Common name | Scientific name                      | Source sequence set | Release date | Total ESTs | WRKY         |      |                    | Classification of WRKY domains <sup>a</sup> |    |         |    |         |    |  |
|-------------|--------------------------------------|---------------------|--------------|------------|--------------|------|--------------------|---------------------------------------------|----|---------|----|---------|----|--|
|             |                                      |                     |              |            | unique genes | ESTs | % EST (WRKY/Total) | 1C                                          | 1N | 2a + 2b | 2c | 2d + 2e | 3  |  |
| Cotton      | <i>Gossypium</i> spp.                | CGI5                | 8/14/2003    | 53,970     | 20           | 27   | 0.05               | 7                                           | 2  | 4       | 3  | 4       | 2  |  |
| Soybean     | <i>Glycine max</i>                   | GmGI11              | 8/21/2003    | 334,730    | 109          | 627  | 0.1873             | 22                                          | 13 | 21      | 19 | 27      | 12 |  |
| Sunflower   | <i>Helianthus annuus</i>             | HaGI3               | 8/18/2003    | 59,713     | 13           | 57   | 0.0955             | 4                                           | 0  | 3       | 5  | 0       | 2  |  |
| Barley      | <i>Hordeum vulgare</i>               | HvGI7               | 8/20/2003    | 343,206    | 53           | 211  | 0.0615             | 4                                           | 8  | 6       | 9  | 6       | 21 |  |
| Tomato      | <i>Lycopersicon esculentum</i>       | LGI9                | 4/17/2003    | 156,645    | 51           | 555  | 0.3543             | 9                                           | 8  | 10      | 6  | 10      | 11 |  |
| Lotus       | <i>Lotus japonicus</i>               | LjGI2               | 4/21/2003    | 33,090     | 13           | 29   | 0.0876             | 3                                           | 1  | 1       | 1  | 5       | 2  |  |
| Lettuce     | <i>Lactuca sativa</i>                | LsGI1               | 10/1/2002    | 68,178     | 18           | 54   | 0.0792             | 2                                           | 3  | 2       | 4  | 4       | 4  |  |
| Ice plant   | <i>Mesembryanthemum crystallinum</i> | McGI4               | 4/23/2003    | 25,840     | 1            | 1    | 0.0039             | 0                                           | 0  | 0       | 1  | 0       | 0  |  |
| Medicago    | <i>Medicago truncatula</i>           | MtGI7               | 5/7/2003     | 189,919    | 62           | 430  | 0.2264             | 9                                           | 9  | 9       | 11 | 17      | 10 |  |
| Onion       | <i>Allium cepa</i>                   | OnGI1               | 9/4/2003     | 19,629     | 17           | 28   | 0.1426             | 3                                           | 4  | 4       | 1  | 4       | 3  |  |
| Pine        | <i>Pinus</i> spp.                    | PGI3                | 8/20/2003    | 81,802     | 4            | 7    | 0.0086             | 3                                           | 0  | 0       | 0  | 1       | 0  |  |
| Rye         | <i>Secale cereale</i>                | RyeGI2              | 8/5/2001     | 8,971      | 5            | 5    | 0.0557             | 0                                           | 2  | 0       | 1  | 1       | 1  |  |
| Sorghum     | <i>Sorghum bicolor</i>               | SbGI6               | 8/20/2003    | 130,897    | 27           | 75   | 0.0573             | 3                                           | 5  | 10      | 3  | 0       | 7  |  |
| Potato      | <i>Solanum tuberosum</i>             | StGI7               | 4/24/2003    | 94,929     | 39           | 134  | 0.1412             | 6                                           | 2  | 9       | 6  | 11      | 7  |  |
| Wheat       | <i>Triticum aestivum</i>             | TaGI7               | 8/20/2003    | 494,195    | 68           | 229  | 0.0463             | 6                                           | 7  | 6       | 14 | 18      | 17 |  |
| Grape       | <i>Vitis vinifera</i>                | VvGI3               | 8/18/2003    | 109,141    | 24           | 105  | 0.0962             | 8                                           | 1  | 1       | 5  | 7       | 3  |  |
| Maize       | <i>Zea mays</i>                      | ZmGI13              | 8/27/2003    | 364,267    | 51           | 184  | 0.0505             | 12                                          | 5  | 5       | 14 | 10      | 6  |  |
| Moss        | <i>Physcomitrella patens</i>         | ESTs                | 11/3/2003    | 102,800    | 6            | 10   | 0.0097             | 1                                           | 0  | 0       | 2  | 3       | 0  |  |
| Fern        | <i>Ceratopteris richardii</i>        | ESTs                | 11/3/2003    | 3,634      | 1            | 1    | 0.0275             | 1                                           | 0  | 0       | 0  | 0       | 0  |  |

<sup>a</sup>WRKY domains are phylogenetically classified according to Eulgem et al. (2000) with modifications (see text). For Group 1, N or C indicates N- or C-terminal domain.