**Supplementary materials**

Table S1. Accession numbers, type and description of the 24 putative USPAs of *Arabidopsis* utilized in the present study. The sequences were retrieved from the Institute for Genomic Research (TIGR). 1MJH-like = putative USPs analogue to that of *Methanococcus jannaschii* MJ0577 (1MJH). S = sequences not present in the PlantsP plant phosphorylation database [25] because they are not kinases. 1.3.1, 1.3.2 and 1.4.1 = clusters of protein kinase.

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| No. | Accession no. | USP type | Description |
| 1 | AT1G09740 | 1MJH-like | Ethylene regulated (ER) |
| 2 | AT1G11360 | 1MJH-like | - |
| 3 | AT1G48960 | 1.3.1 | - |
| 4 | AT1G69080 | S | - |
| 5 | AT1G77280 | 1.3.2 | - |
| 6 | AT2G21620\* | 1MJH-like | Auxin-regulated |
| 7 | AT2G24370 | 1.4.1 | - |
| 8 | AT2G45910 | N/A | N/A |
| 9 | AT2G47710 | 1MJH-like | - |
| 10 | AT3G01520 | 1MJH-like | - |
| 11 | AT3G11930 | 1MJH-like | ER-like |
| 12 | AT3G17020 | 1MJH-like | ER6-like |
| 13 | AT3G21210 | 1MJH-like | CHP-rich zinc finger protein |
| 14 | AT3G53990 | 1MJH-like | ER-like (drought regulated) |
| 15 | AT3G62550\* | 1MJH-like | ER-like (drought regulated) |
| 16 | AT4G25160 | 1.4.1 | - |
| 17 | AT4G27320 | 1MJH-like | Phosphorylated in response to microbial elucidation |
| 18 | AT4G31230 | 1.4.1 | - |
| 19 | AT5G12000 | 1.4.1 | - |
| 20 | AT5G14680 | 1MJH-like | - |
| 21 | AT5G26150 | 1.4.1 | - |
| 22 | At5g54430\* | 1MJH-like | Substrate of the stress-regulated mitogen-activated protein kinases (MAPKs) |
| 23 | AT5G61550 | 1.4.1 | Involved in disease resistance |
| 24 | AT5G63940 | 1.3.2 | - |

\*USPA-like domain is missing amino acids at the C terminus