

**Additional file 5: Table 4.** List of 25 candidate regulatory genes newly knocked out in *Penicillium oxalicum* in this study

| <b>Name</b>     | <b>InterPro annotation of predicted protein</b> | <b>Domain description of predicted protein</b> |
|-----------------|---|--|
| <i>POX00148</i> | IPR007087                                       | Zinc finger, C2H2-type                         |
| <i>POX00621</i> | IPR009395                                       | GCN5-like 1                                    |
| <i>POX02083</i> | IPR001138                                       | Zinc finger, Zn2Cys6 type                      |
|                 | IPR000116                                       | High mobility group protein HMGA;              |
|                 | IPR000637                                       | HMG-I/HMG-Y;                                   |
| <i>POX02391</i> | IPR002740                                       | EVE domain;                                    |
|                 | IPR015947                                       | PUA-like domain;                               |
|                 | IPR017956                                       | AT hook  |
|                 | IPR001766                                       | Forkhead transcription factor;                 |
| <i>POX02677</i> | IPR011991                                       | Winged helix repressor DNA-binding domain      |
|                 | IPR001005                                       | Myb;   |
| <i>POX02687</i> | IPR009057                                       | Homeodomain-like;                              |
|                 | IPR001138                                       | Zinc finger, Zn2Cys6 type;                     |
| <i>POX03626</i> | IPR007219                                       | Fungal_Trans                                   |
|                 | IPR001138                                       | Zinc finger, Zn2Cys6 type;                     |
| <i>POX03890</i> | IPR007219                                       | Fungal_Trans                                   |
|                 | IPR001138                                       | Zinc finger, Zn2Cys6 type;                     |
| <i>POX04833</i> | IPR007219                                       | Fungal_Trans                                   |
| <i>POX05190</i> | IPR007087                                       | Zinc finger, C2H2-type                         |
| <i>POX05277</i> | IPR001138                                       | Zinc finger, Zn2Cys6 type                      |
| <i>POX05530</i> | IPR007219                                       | Fungal_Trans                                   |
| <i>POX05692</i> | IPR008967                                       | p53-like transcription factor                  |
| <i>POX06123</i> | IPR001138                                       | Zinc finger, Zn2Cys6 type                      |
| <i>POX06761</i> | IPR001138                                       | Zinc finger, Zn2Cys6 type                      |
| <i>POX07747</i> | IPR007219                                       | Fungal_Trans                                   |
| <i>POX08097</i> | IPR007087                                       | Zinc finger, C2H2-type                         |
| <i>POX08219</i> | IPR007219                                       | Fungal_Trans                                   |
| <i>POX08292</i> | IPR001387                                       | Helix-turn-helix type 3                        |
| <i>POX08340</i> | IPR007219                                       | Fungal_Trans                                   |
| <i>POX08796</i> | IPR001138                                       | Zinc finger, Zn2Cys6 type                      |
| <i>POX09116</i> | IPR011991                                       | Winged helix repressor DNA-binding domain      |
| <i>POX09124</i> | IPR001138                                       | Zinc finger, Zn2Cys6 type                      |
| <i>POX09469</i> | IPR011991                                       | Winged helix repressor DNA-binding domain      |
|                 | IPR001138                                       | Zinc finger, Zn2Cys6 type;                     |
| <i>POX09500</i> | IPR007219                                       | Fungal_Trans                                   |