**Table S3** Molecular characteristics of *PHA* genes in potato.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Gene ID | Gene name | N-amino acids | Molecular weight | Theoretical pI | Transmembrane domain | Subcellular localization |
| Soltu.DM.06G026220 | *PHA1* | 956 | 105040.91 | 6.31 | 8 | plas:12,cyto:1,vacu:1 |
| Soltu.DM.07G006650 | *PHA2* | 952 | 105013.91 | 6.31 | 10 | plas:12,cyto:1,vacu:1 |
| Soltu.DM.03G027310 | *PHA3* | 956 | 105117.26 | 6.31 | 8 | plas:12,cyto:1,vacu:1 |
| Soltu.DM.07G000080 | *PHA4* | 951 | 104466.05 | 5.71 | 8 | Plas13, vacu1 |
| Soltu.DM.12G027750 | *PHA5* | 924 | 101582.49 | 5.63 | 8 | plas:13, E.R.：1 |
| Soltu.DM.03G031320 | *PHA6* | 954 | 105293.18 | 6.37 | 11 | plas:11,vacu:2,cyto:1 |
| Soltu.DM.08G024180 | *PHA7* | 966 | 106154.21 | 6.79 | 8 | plas:12,vacu:1 |
| Soltu.DM.07G000070 | *PHA8* | 951 | 104512.12 | 5.83 | 8 | plas: 13, vacu: 1 |