**Supplementary Table 1. Combinations of digestion enzymes used.**

|  |  |  |
| --- | --- | --- |
| **Enzyme Formula** | **Material & Protoplasts Isolation Efficiency** | **References** |
|

|  |
| --- |
| 1.5% (wt/vol) Cellulase R-10  |
| 0.4% (wt/vol) Macerozyme R-10  |
| 20 mM MES |
| 0.4 M mannitol |
| 20 mM KCl  |
| 10 mM CaCl2 |
| 0.1% (wt/vol) BSA |

 | 1 ×104～2 ×105 /g | (Shen et al., 2014) |
|

|  |
| --- |
| 1.5% (w/v) Cellulase RS  |
| 0.75% (w/v) Macerozyme R-10  |
| 10mM MES |
| 0.5M mannitol |
| 10 mM CaCl2 |
| 0.1% (wt/vol) BSA |

 | 1×104～1×105 /g |  (Shen et al., 2014) |
|

|  |
| --- |
| 1.5% (wt/vol) CellulaseR-10  |
| 0.75% (wt/vol) MacerozymeR-10  |
| 10 mM MES |
| 0.6 M mannitol |
| 1mM CaCl2 |
| 0.1% (wt/vol) BSA |

 | 1×104～1×105 /g | (Mazarei et al., 2008) |
|

|  |
| --- |
| 3% (wt/vol) CellulaseR-10  |
| 0.8% (wt/vol) MacerozymeR-10  |
| 20 mM MES |
| 0.4 M mannitol20 mM KCl |
| 10 mM CaCl2 |
| 0.1% (wt/vol) BSA |

 | 1×104～1.7×105 /g | * (Guo et al., 2012)
 |
|

|  |
| --- |
| 3% (wt/vol) CellulaseR-10  |
| 0.8% (wt/vol) MacerozymeR-10  |
| 0.04% (w/v) Pectinase20 mM MES |
| 0.4 M mannitol20 mM KCl |
| 10 mM CaCl2 |
| 0.1% (wt/vol) BSA |

 | 1×104～1×105 /g | (Shen et al., 2017) |

**Supplementary References**

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